

# HCD-J300

## SERVICE MANUAL

Ver 1.0 2001.06



AEP Model  
UK Model  
E Model



HCD-J300 is the Amplifier, MD deck, CD player, Tape player and Tuner section in CMT-DC500MD.

CD Section	Model Name Using Similar Mechanism	HCD-CP500K/CP500MD
	CD Mechanism Type	CDM55F-K4BD43
	Base Unit Type	BU-K4BD43
	Optical Pick-up Type	KSM-213DHAP
MD Section	Model Name Using Similar Mechanism	HCD-CP500K/CP500MD
	MD Mechanism Type	MDM-7B
	Optical Pick-up Type	KMS-260B
Tape deck Section	Model Name Using Similar Mechanism	HCD-CP500K/CP500MD
	Tape Transport Mechanism Type	Mech deck

### SPECIFICATIONS

#### Amplifier section

##### European model:

DIN power output (rated): 30 + 30 W  
(6 ohms at 1 kHz, DIN)  
Continuous RMS power output (reference):  
35 + 35 W  
(6 ohms at 1 kHz, 10% THD)  
Music power output (reference):  
85 + 85 W

##### Other models:

The following measured at 230 V AC, 60 Hz  
DIN power output (rated): 30 + 30 W  
(6 ohms at 1 kHz, DIN)  
Continuous RMS power output (reference):  
35 + 35 W  
(6 ohms at 1 kHz, 10% THD)  
The following measured at 220 V AC, 60 Hz  
DIN power output (rated): 24 + 24 W  
(6 ohms at 1 kHz, DIN)  
Continuous RMS power output (reference):  
27 + 27 W  
(6 ohms at 1 kHz, 10% THD)

#### Inputs

##### ANALOG IN (phono jacks):

Sensitivity 250 mV,  
impedance 47 kilohms

DIGITAL OPTICAL IN (Supported sampling  
frequencies: 32 kHz, 44.1 kHz and 48 kHz)

#### Outputs

##### PHONES (stereo minijack):

Accepts headphones with  
an impedance of 8 ohms  
or more

##### SPEAKER:

Accepts impedance of 6 to  
16 ohms

— Continued on next page —

## MICRO HI-FI COMPONENT SYSTEM

9-873-173-01  
2001F1600-1  
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**Sony Corporation**  
Home Audio Company  
Shinagawa Tec Service Manual Production Group

# SONY®

## HCD-J300

### CD player section

System	Compact disc and digital audio system
Laser	Semiconductor laser ( $\lambda = 780 \text{ nm}$ ) Emission duration: continuous
Wavelength	780 – 790 nm
Frequency response	2 Hz – 20 kHz ( $\pm 0.5 \text{ dB}$ )

### Tape player section

Recording system	4-track 2-channel stereo
Frequency response	50 – 13,000 Hz ( $\pm 3 \text{ dB}$ ), using a Sony TYPE I cassette
Wow and flutter	$\pm 0.15\%$ W. Peak (IEC) $0.1\%$ W. RMS (NAB) $\pm 0.2\%$ W. Peak (DIN)

### MD deck section

System	MiniDisc digital audio system
Laser	Semiconductor laser ( $\lambda = 780 \text{ nm}$ ) Emission duration: continuous
Sampling frequency	44.1 kHz
Frequency response	5 Hz – 20 kHz

### Tuner section

FM stereo, FM/AM superheterodyne tuner

#### FM tuner section

Tuning range	87.5 – 108.0 MHz (50-kHz step)
Antenna	FM wire antenna
Antenna terminals	75 ohm unbalanced
Intermediate frequency	10.7 MHz

#### AM tuner section

Tuning range	531 – 1,602 kHz (with the tuning interval set at 9 kHz)
European model:	530 – 1,710 kHz (with the tuning interval set at 10 kHz)
Other models:	531 – 1,602 kHz (with the tuning interval set at 9 kHz)
Antenna	AM loop antenna, external antenna terminal
Intermediate frequency	450 kHz

### General

Power requirements	230 V AC, 50/60 Hz
European model:	220 – 240 V AC, 50/60 Hz
Hong Kong model:	110 – 120 V or 220 – 240 V AC, 50/60 Hz
Other models:	Adjustable with voltage selector

Power consumption	See the nameplate
European model:	0.5 W (in the standby mode)
Other models:	See the nameplate

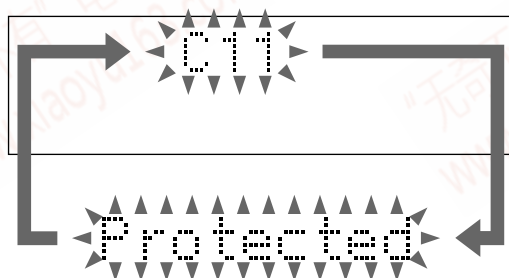
Dimensions (w/h/d)	Approx. 190 × 253 × 345 mm incl. projecting parts and controls
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Mass	Approx. 7.0 kg
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Design and specifications are subject to change without notice.

## Self-diagnosis display

This system has a Self-diagnosis display function to let you know if there is a system malfunction. The display shows a code made up of three letters and a message alternately to show you the problem. To solve the problem refer to the following list. If any problem persists, consult your nearest Sony dealer.



### C11/Protected

The MD is protected against erasure.

Remove the MD and slide the tab to close the slot (see page 16).

### C12/Cannot Copy

You tried to record a CD or MD with a format that the system does not support, such as a CD-ROM.

→ Remove the disc and turn off the system once, then turn it on again.

### C13/REC Error

Recording could not be performed properly.

→ Move the system to a stable place, and start recording over from the beginning.

The MD is dirty or scratched, or the MD does not meet the standards.

→ Replace the MD and start recording over from the beginning.

### C13/Read Error

The MD deck cannot read the disc information properly.

→ Remove the MD once, then load it again.

### C14/Toc Error

The MD deck cannot read the disc information properly.

→ Replace the MD.

→ Erase all the recorded contents of the MD using All Erase Function (see page 27).

### C41/Cannot Copy

The sound source is a copy of commercially available music software.

→ The Serial Copy Management System prevents making a digital copy (see page 47).

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## HCD-J300

### SECTION 1 SERVICING NOTE

#### NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.

During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.

The flexible board is easily damaged and should be handled with care.

#### FOR CD

##### NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

#### FOR MD

##### NOTES ON LASER DIODE EMISSION CHECK

Never look into the laser diode emission from right above when checking it for adjustment. It is feared that you will lose your sight.

Laser component in this product is capable of emitting radiation exceeding the limit for Class 1.

CLASS 1 LASER PRODUCT  
LUOKAN 1 LASERLAITE  
KLASS 1 LASERAPPARAT

This appliance is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT MARKING is located on the rear exterior.

**CAUTION** : INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED. AVOID EXPOSURE TO BEAM.  
**ADVARSEL** : USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSÆTTELSE FOR STRÅLING.  
**VORSICHT** : UNSICHTBARE LASERSTRAHLUNG, WENN ABDECKUNG GEÖFFNET UND SICHERHEITSPERRIEGELUNG ÜBERBRÜCKT. NICHT DEM STRAHL AUSSETZEN.  
**VARO!** : AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALT-TIINA NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.  
**VARNING** : OSYNLIG LASERSTRÅLING NÅR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URKOPPLAD. BETRÄKTA EJ STRÅLEN.  
**ADVARSEL** : USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES OG SIKKERHEDSLÅS BRYTES. UNNGÅ EKSPONERING FOR STRÅLEN.  
**VIGYÁZAT!** : A BURKOLAT NYITÁSAKOR LÁTHATATLAN LÉZERSUGÁRVESZÉLY! KERÜLJE A BESUGÁRZÁST!

This caution label is located inside the unit.

#### CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

#### Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

#### Flexible Circuit Board Repairing

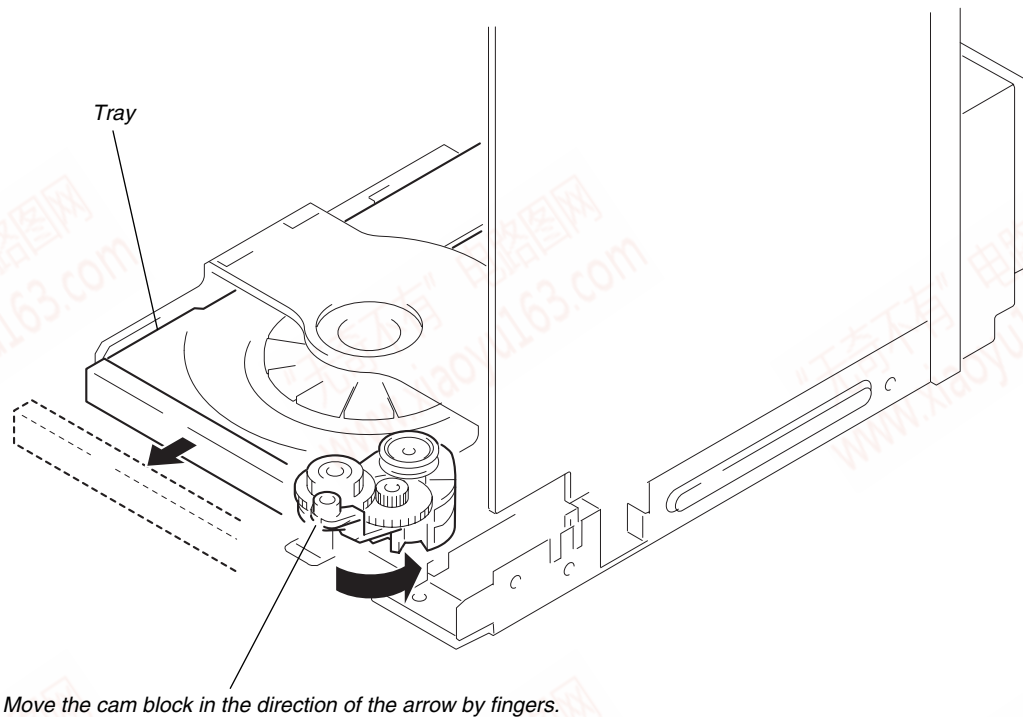
- Keep the temperature of soldering iron around 270°C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

#### SAFETY-RELATED COMPONENT WARNING!!

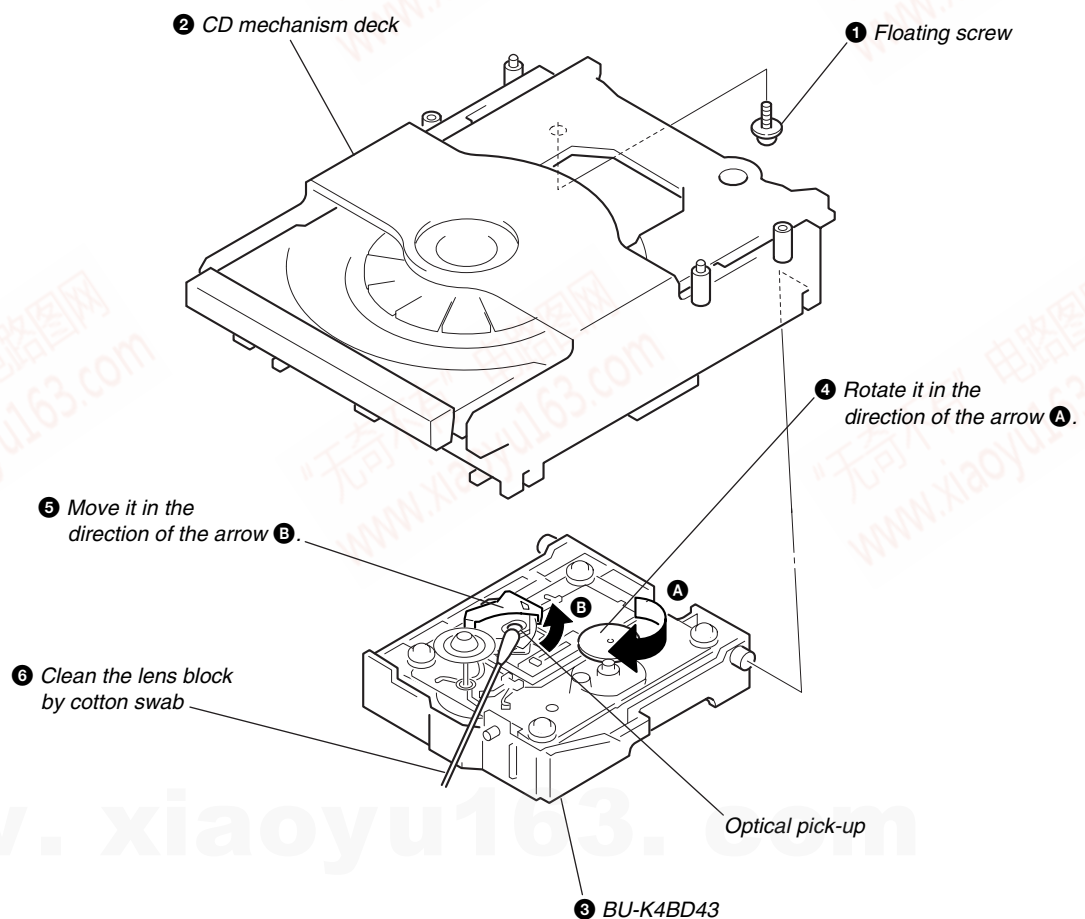
**COMPONENTS IDENTIFIED BY MARK  $\triangle$  OR DOTTED LINE WITH MARK  $\triangle$  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.**



## DRAWING OUT THE TRAY DURING POWER OUT

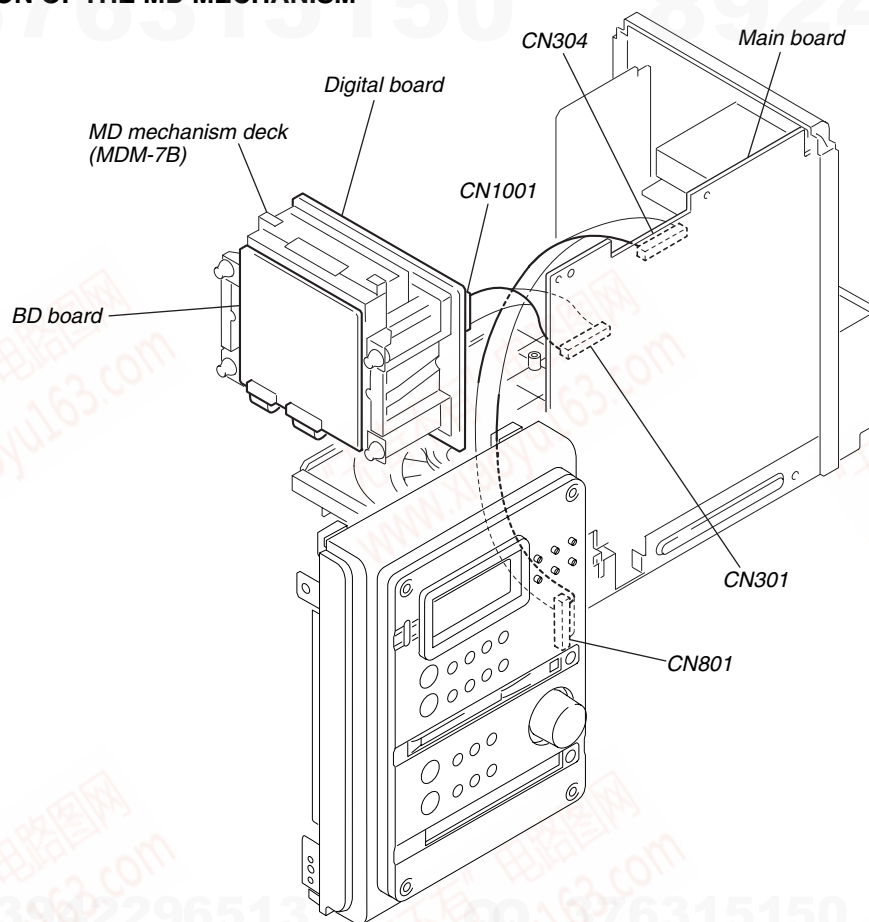


## CLEANING THE OPTICAL PICK-UP (CD PLAYER)

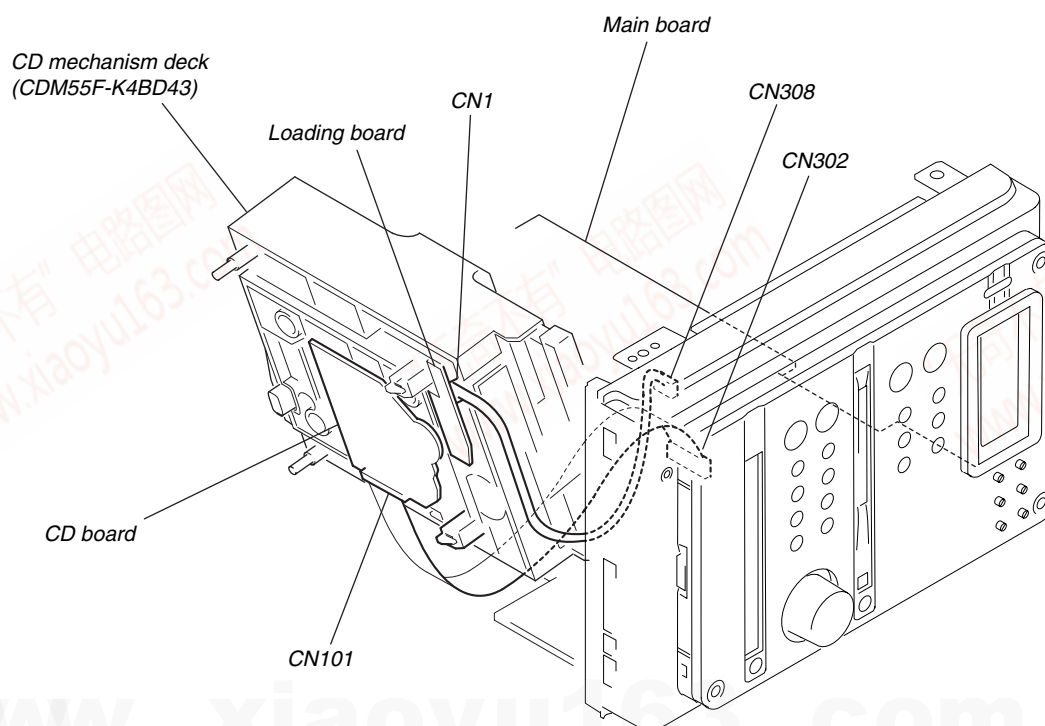


## HCD-J300

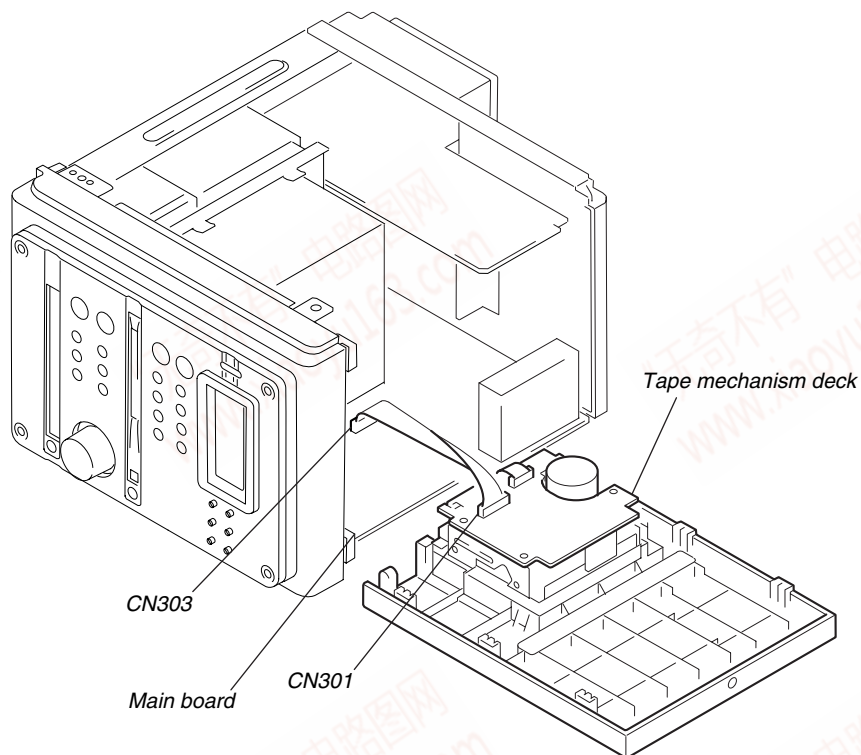
### SERVICE POSITION OF THE MD MECHANISM



### SERVICE POSITION OF THE CD MECHANISM



**SERVICE POSITION OF THE CASSETTE  
MECHANISM DECK**



## HCD-J300

### JIG FOR CHECKING BD (MD) BOARD WAVEFORM

The special jig (J-2501-196-A) is useful for checking the waveform of the BD (MD) board. The names of terminals and the checking items to be performed are shown as follows.

GND : Ground

I+3V : For measuring IOP (Check the deterioration of the optical pick-up laser)

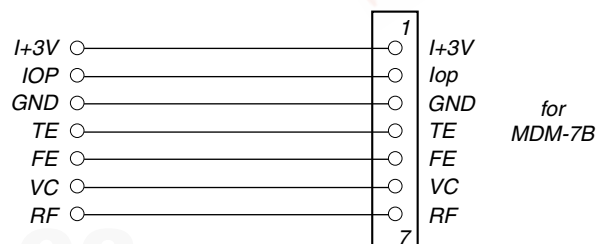
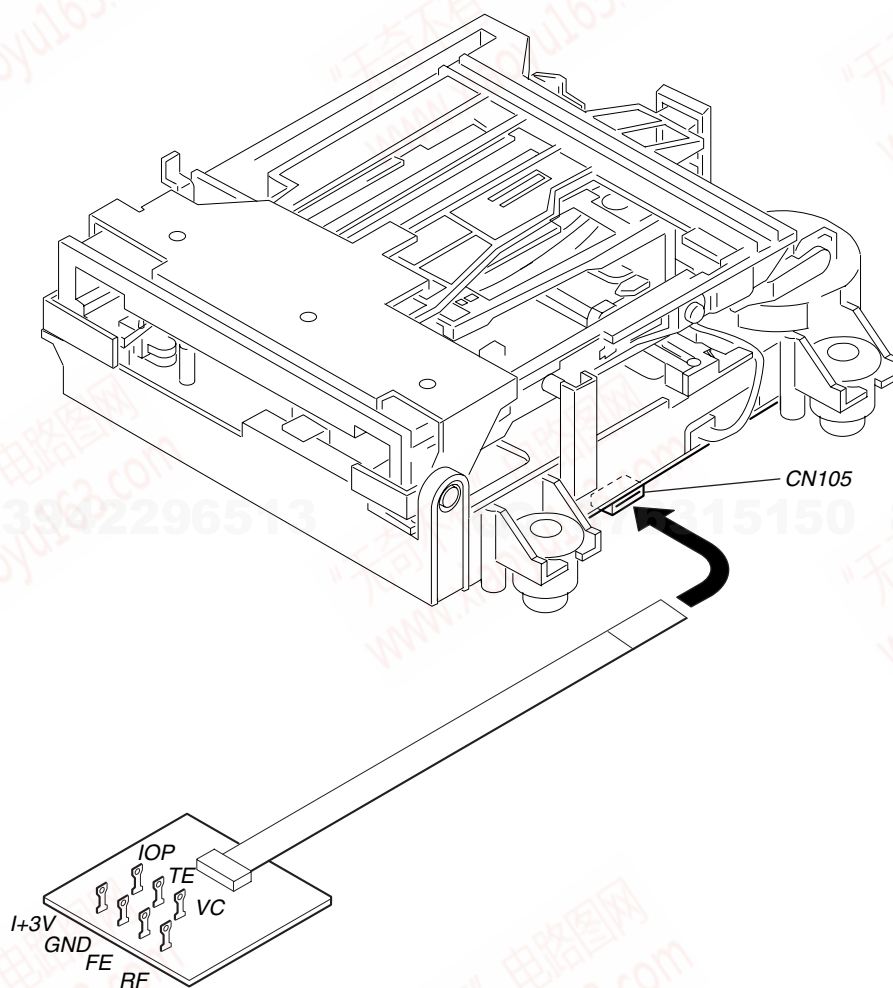
IOP : For measuring IOP (Check the deterioration of the optical pick-up laser)

TE : TRK error signal (Traverse adjustment)

VC : Reference level for checking the signal

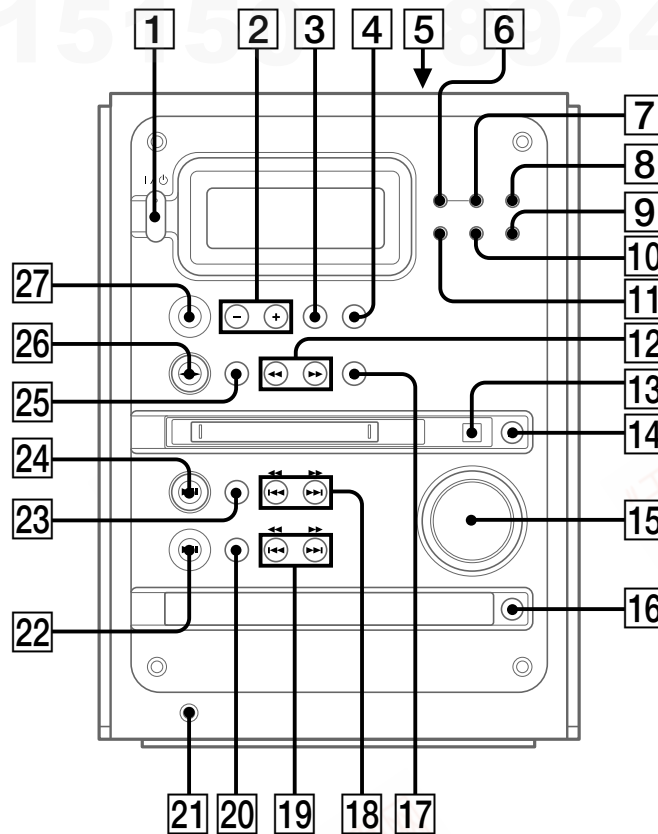
RF : RF signal (Check jitter)

FE : Focus error signal



## SECTION 2 GENERAL

This section is extracted from instruction manual.



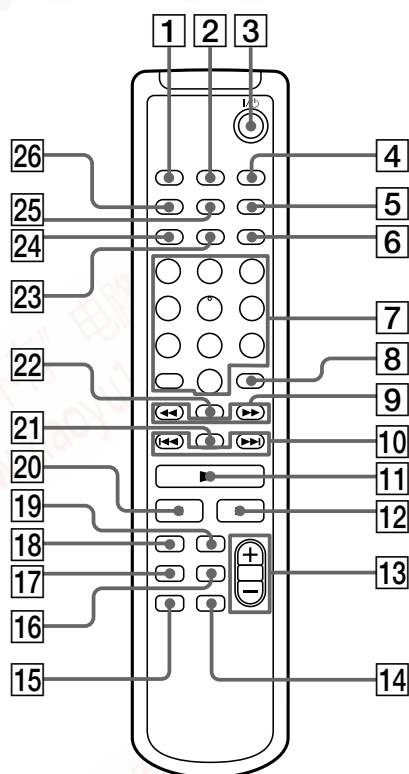
BAND [27] (36, 37)  
 CD ▲ [16] (10, 11)  
 CD ◀▶▶▶ [19] (11, 12)  
 CD ▶▶▶▶ [19] (11)  
 CD ■ [20] (11, 12, 19, 40)  
 CD ▶▶ [22] (10-12)  
 ENTER/START [7] (19, 20, 40, 41)  
 FUNCTION [9] (10, 12, 15, 16, 21-24, 39, 41, 45)  
 MD ▲ [14] (15, 16, 18, 26)  
 MD ◀▶▶▶ [18] (15-17, 52)  
 MD ▶▶▶▶ [18] (15)  
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 MD ▶▶ [24] (15-17, 21)

PHONES jack [21]  
 PLAY MODE/DIRECTION [3]  
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 REC MODE [8] (22)  
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 REPEAT [4] (11, 15, 36)  
 STEREO/MONO [4] (37)  
 SYNCHRO REC [6] (19, 20, 40)  
 TAPE ◀▶▶▶ [12] (39)  
 TAPE ▶▶ [17] (39, 41)  
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 TAPE ◀▶ [26] (39-41)  
 TUNING MODE [3] (36, 37)  
 TUNING +/- [2] (36, 37)  
 VOLUME [15]

### BUTTON DESCRIPTIONS

⏻ (power) [1] (7, 18, 26, 37, 43, 45, 52)  
 ● MD [11] (21, 24, 25, 52)  
 ▲ PUSH [5] (39)  
 ● TAPE [10] (41)





BASS/TRE **[5]** (42)  
 CD **[17]** (10, 12, 13)  
 CLEAR **[8]** (12, 14, 16, 17, 27, 38)  
 CLOCK/TIMER SELECT **[2]** (44, 45)  
 CLOCK/TIMER SET **[4]** (9, 43, 44)  
 CURSOR **[9]** (9, 14, 27)  
 DISPLAY **[21]** (9, 12, 13, 17, 21, 38)  
 DSG **[14]** (42)  
 ENTER/YES **[6]** (9, 12, 14, 16, 21–36, 38, 43–45)  
 FUNCTION **[15]** (10, 12, 15, 16, 21–24, 39, 41, 45)  
 MD **[18]** (15, 16, 30–32, 34)  
 MENU/NO **[24]** (14, 22–36)  
 NAME EDIT/SELECT **[23]** (13, 14, 26, 27, 38)  
 Number buttons **[7]** (11–16, 17, 27, 37)

PLAY MODE **[26]** (10, 12, 13, 15–17, 26, 34)  
 REPEAT **[25]** (11, 15)  
 SCROLL **[22]** (14, 17, 28)  
 SLEEP **[1]** (42)  
 TAPE **[16]**  
 TUNER BAND **[19]** (36, 37)  
 VOLUME +/- **[13]**

#### BUTTON DESCRIPTIONS

**[3]** (power) (7, 18, 26, 37, 43, 45)  
**[9]** (11, 15, 30, 32)  
**[10]** (9, 11–17, 22–25, 27–36, 42–45)  
**[11]** (10, 12, 15, 17, 25)  
**[12]** (11, 12, 15, 17, 19, 20, 25)  
**[20]** (11, 15)

## Setting the time

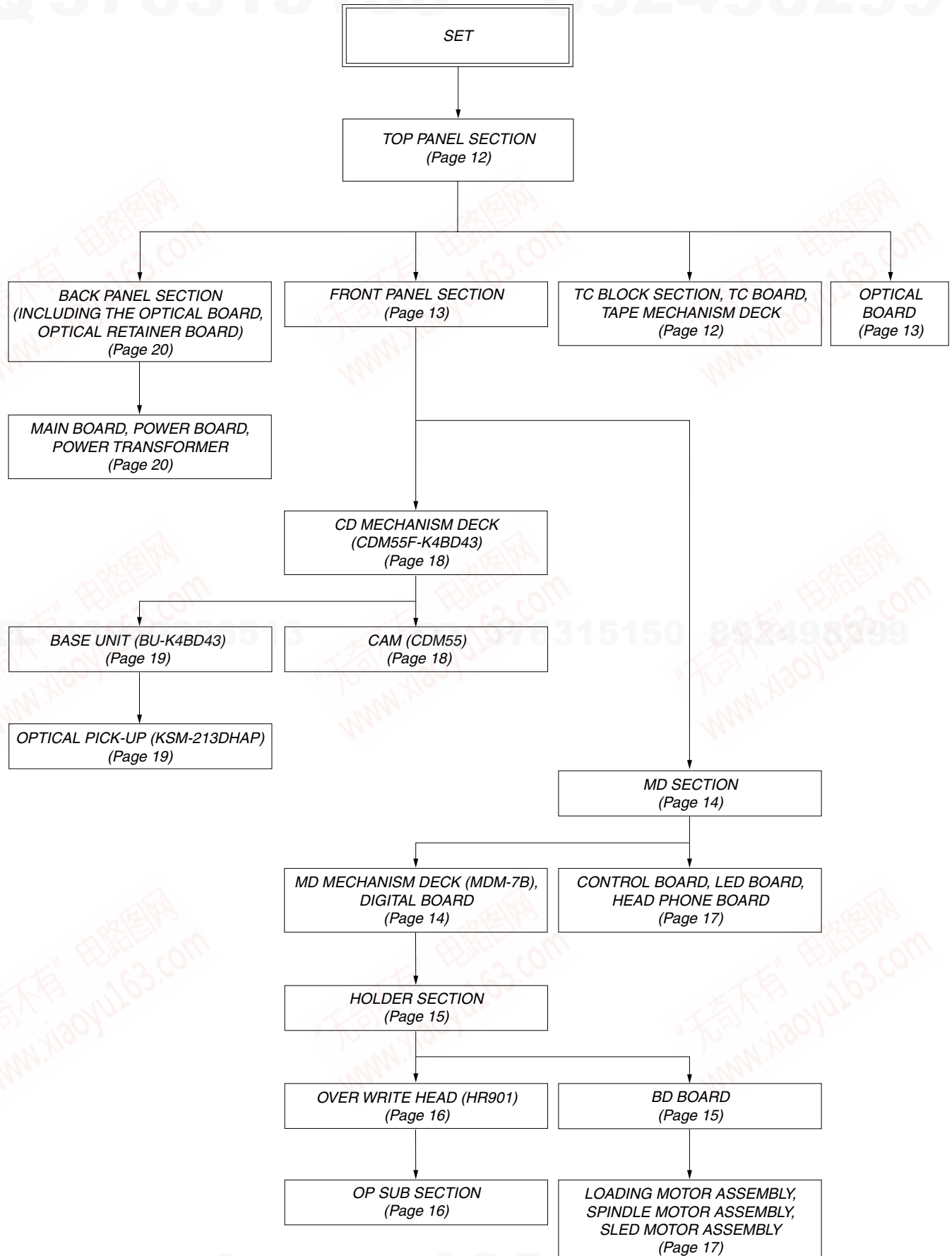
- 1** Turn on the system.
- 2** Press **CLOCK/TIMER SET** on the remote.  
If you are setting the clock for the first time, go to step 5.
- 3** Press **◀** or **▶** on the remote repeatedly until “**CLOCK SET**” appears in the display.
- 4** Press **ENTER/YES** on the remote.  
The hour indication flashes.
- 5** Press **◀** or **▶** on the remote repeatedly to set the hour.
- 6** Press **ENTER/YES** or **CURSOR** on the remote.  
The minute indication flashes.
- 7** Press **◀** or **▶** on the remote repeatedly to set the minute.
- 8** Press **ENTER/YES** on the remote.  
The clock will begin operating.

#### To reset the system clock

Start over from step 1.

## SECTION 3 DISASSEMBLY

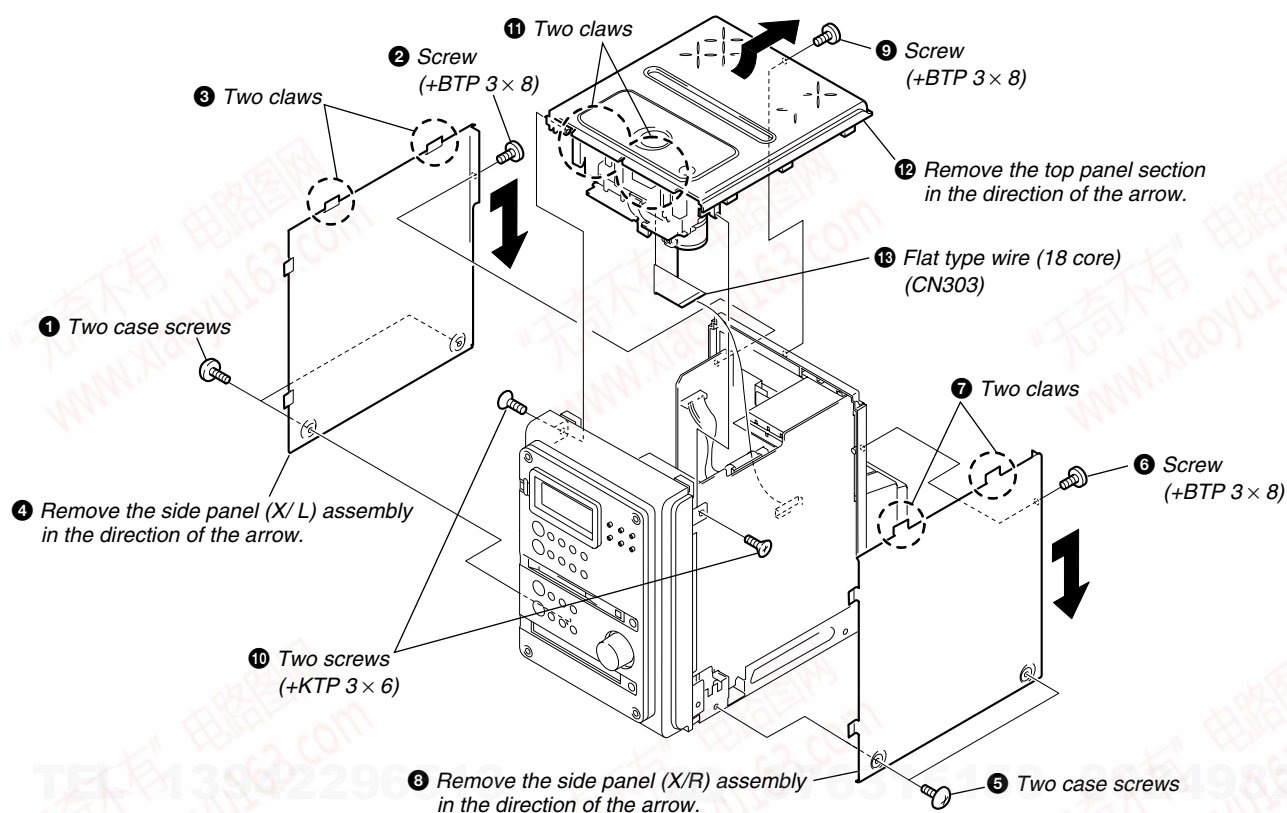
- The equipment can be removed using the following procedure.



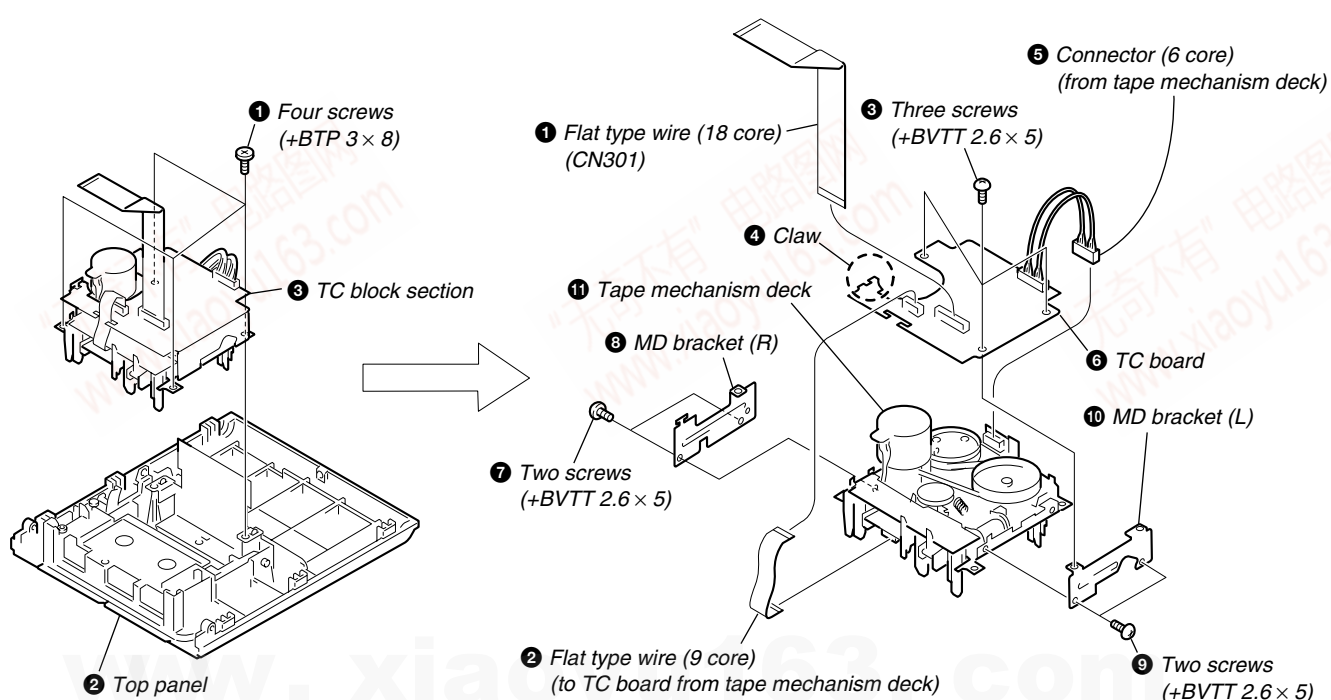
# HCD-J300

**Note:** Follow the disassembly procedure in the numerical order given.

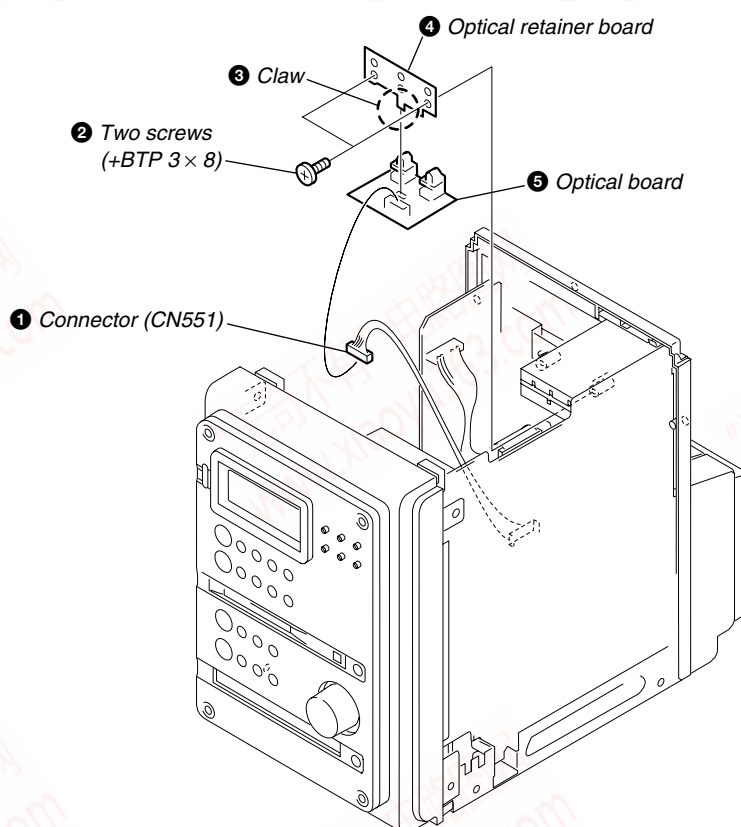
## TOP PANEL SECTION



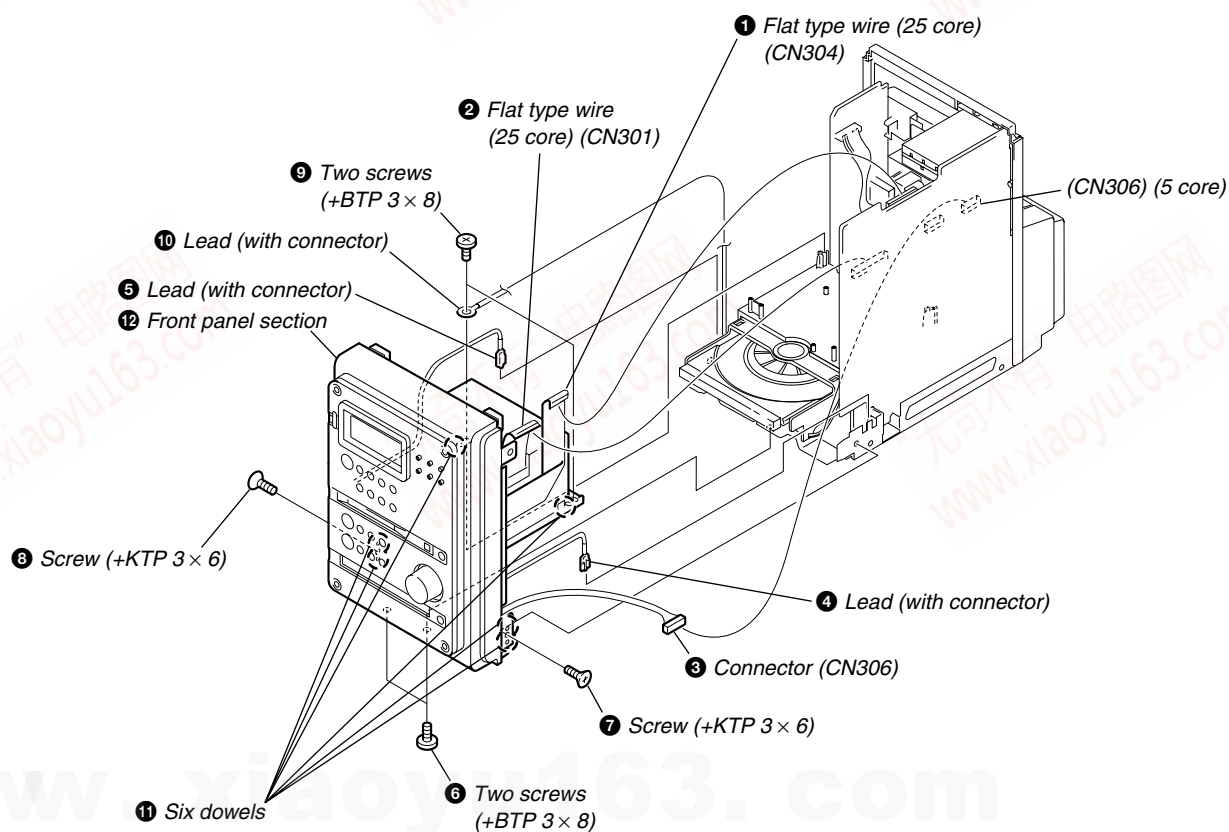
## TC BLOCK SECTION, TC BOARD, TAPE MECHANISM DECK



## OPTICAL BOARD

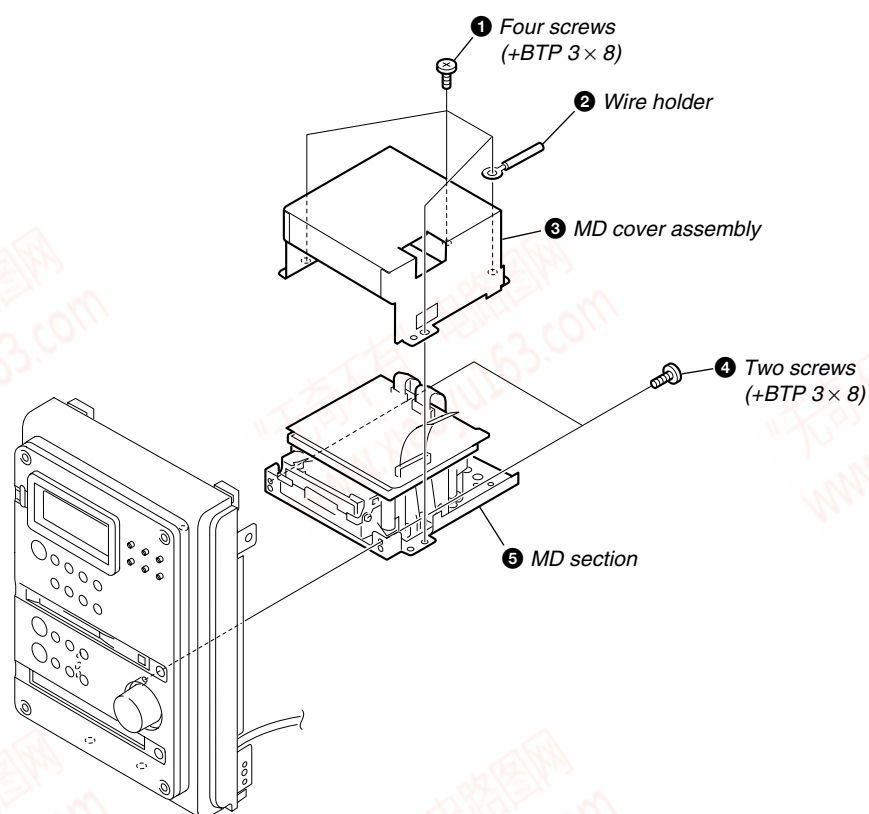


## FRONT PANEL SECTION

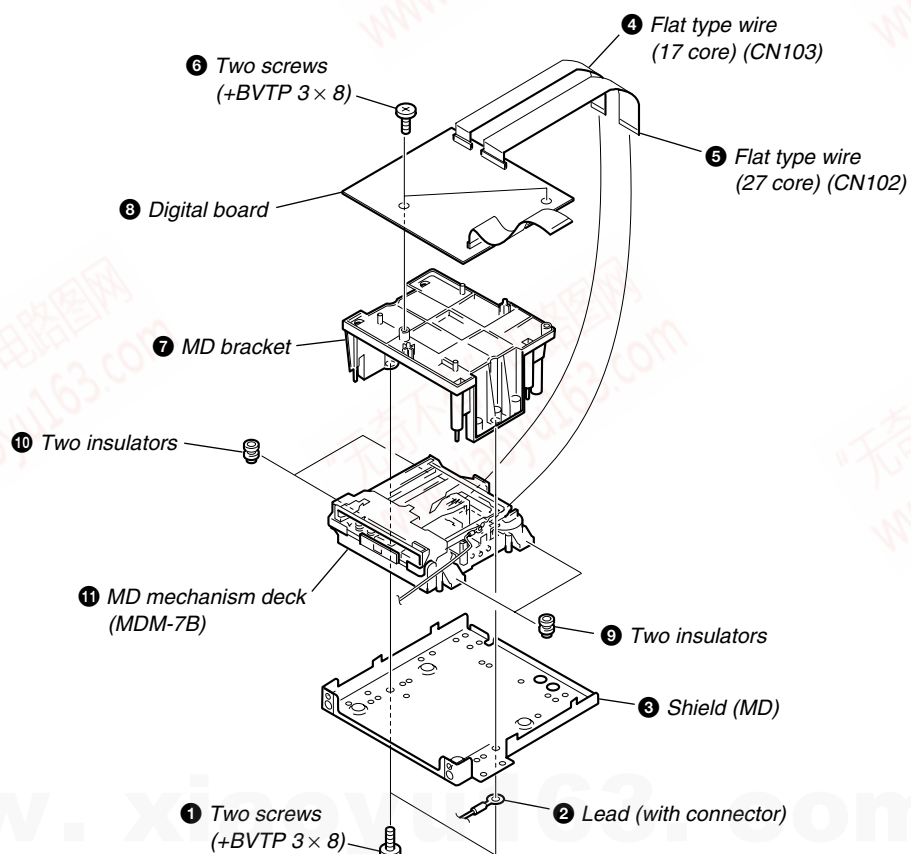


## HCD-J300

### MD SECTION

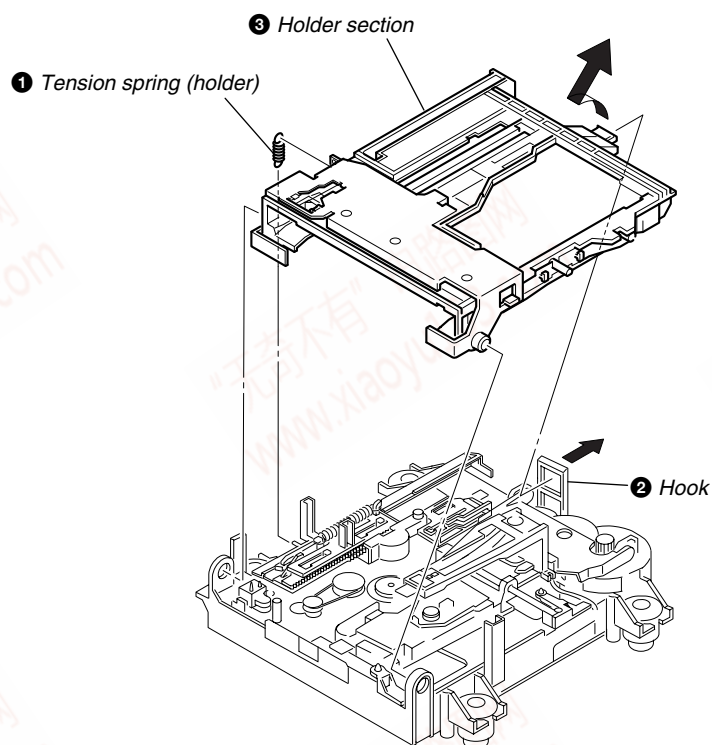


### MD MECHANISM DECK (MDM-7B), DIGITAL BOARD

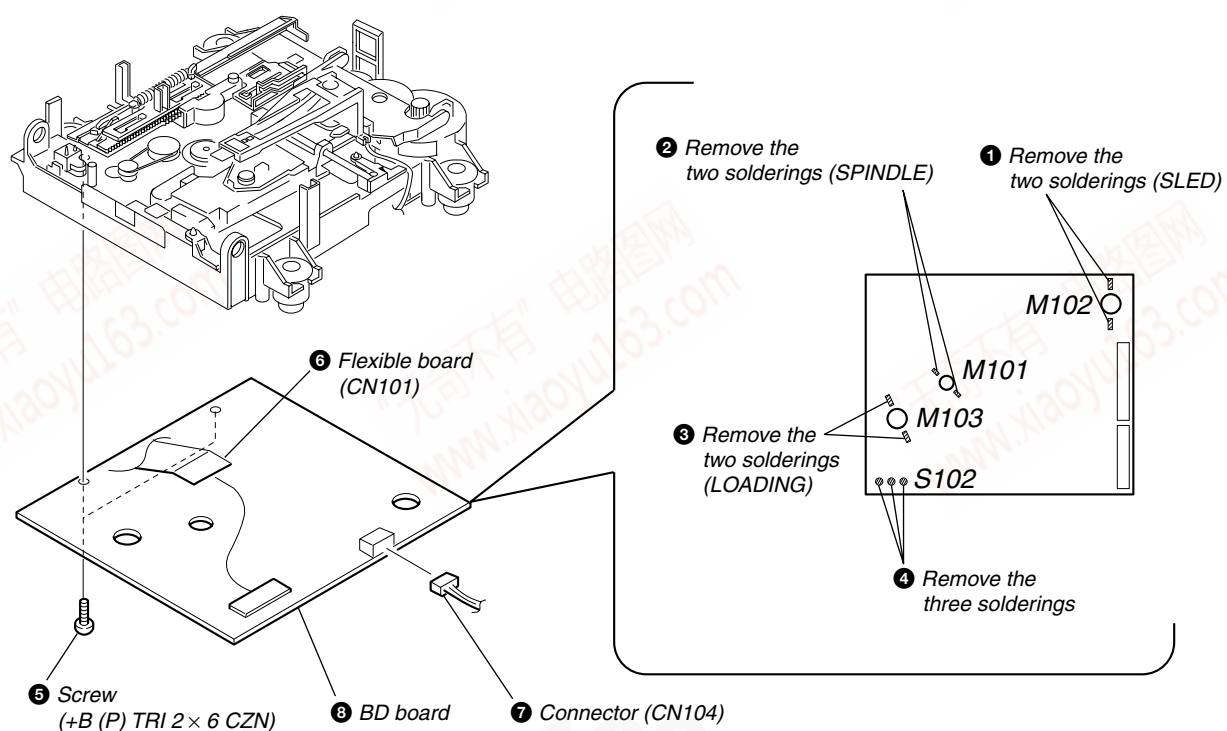




# HOLDER SECTION

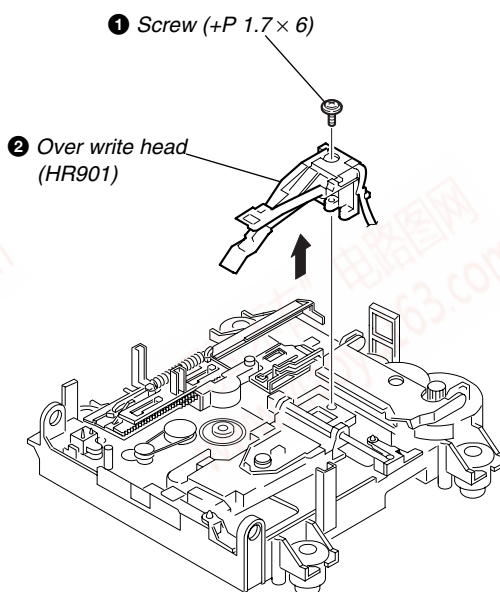


## BD BOARD

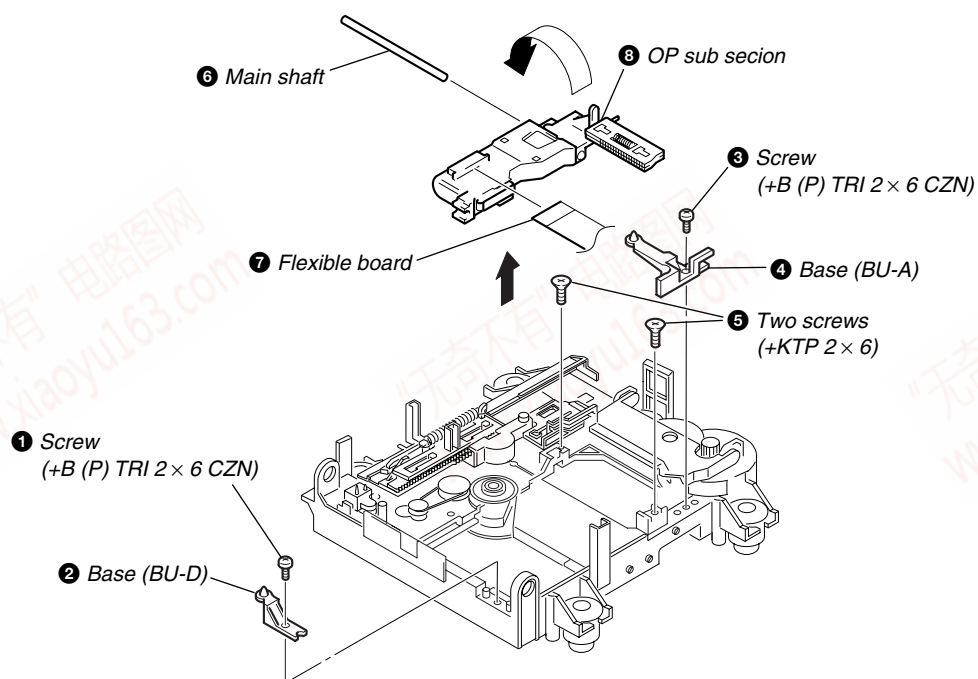


## HCD-J300

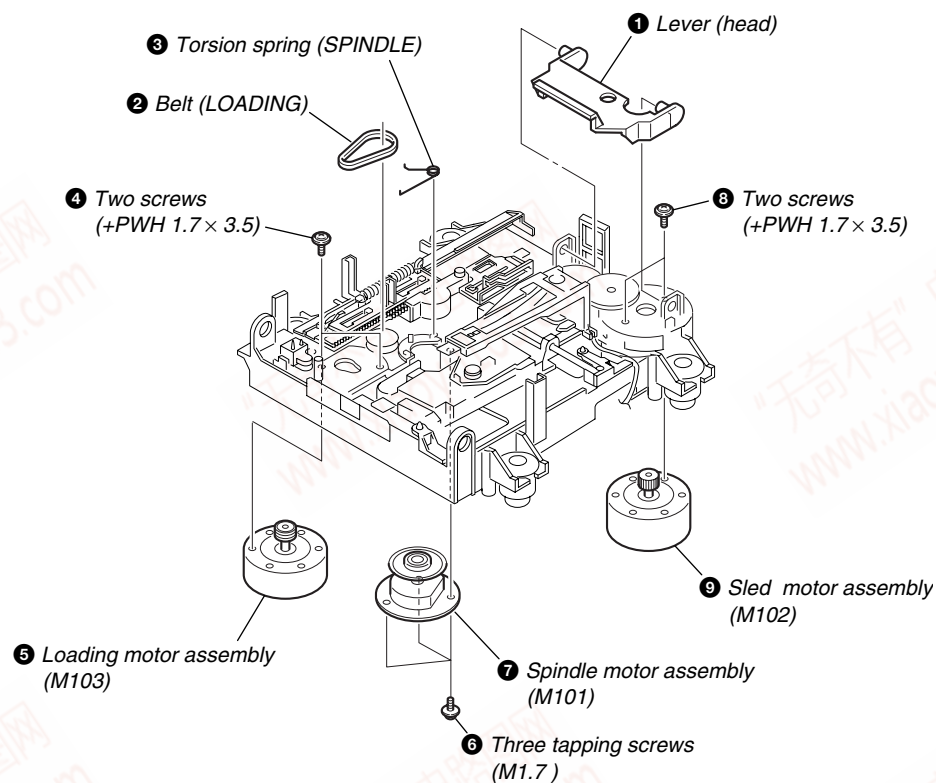
### OVER WRITE HEAD (HR901)



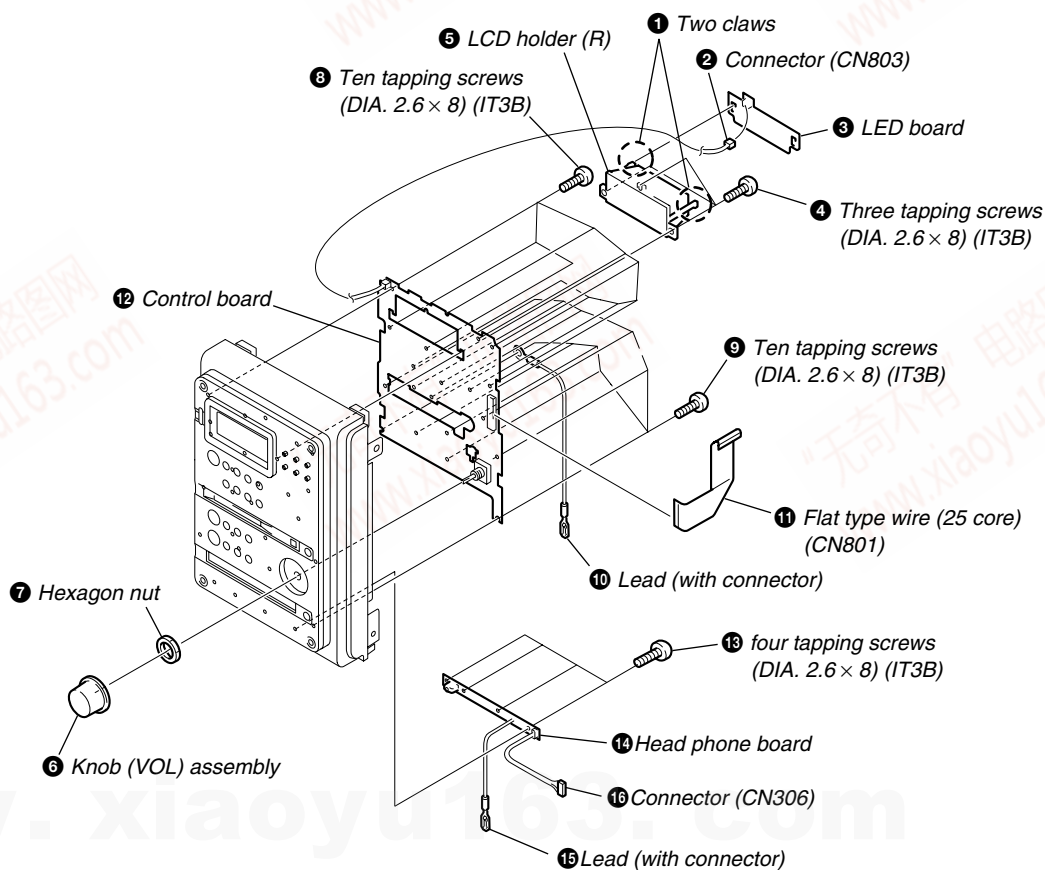
### OP SUB SECTION



# LOADING MOTOR ASSEMBLY, SPINDLE MOTOR ASSEMBLY, SLED MOTOR ASSEMBLY

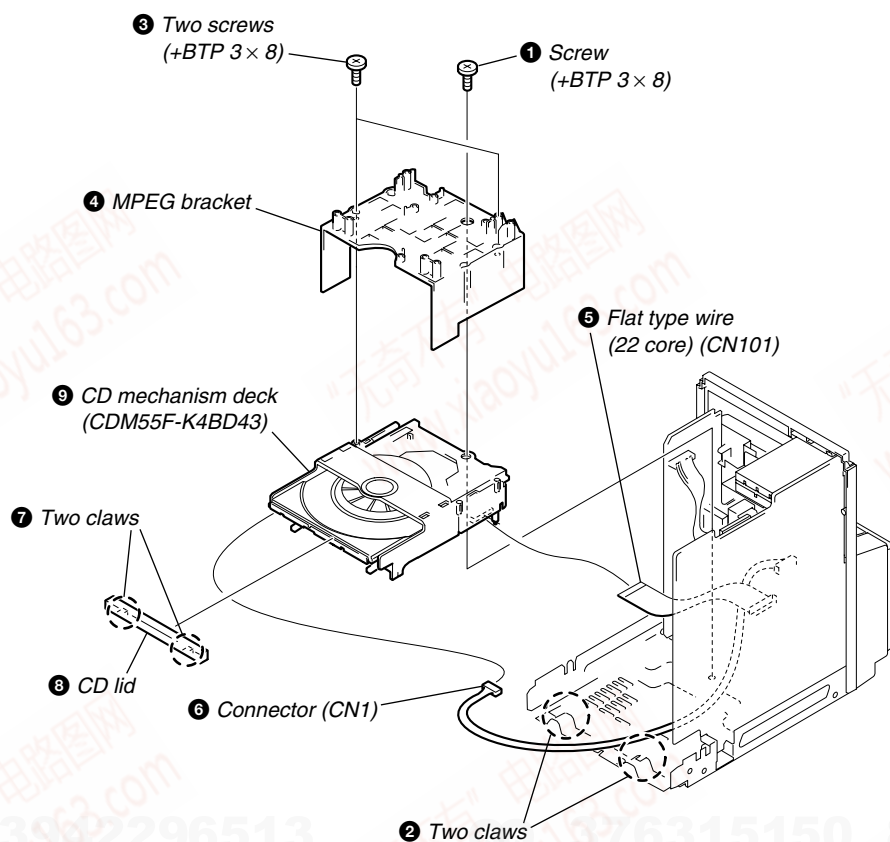


## CONTROL BOARD, LED BOARD, HEAD PHONE BOARD

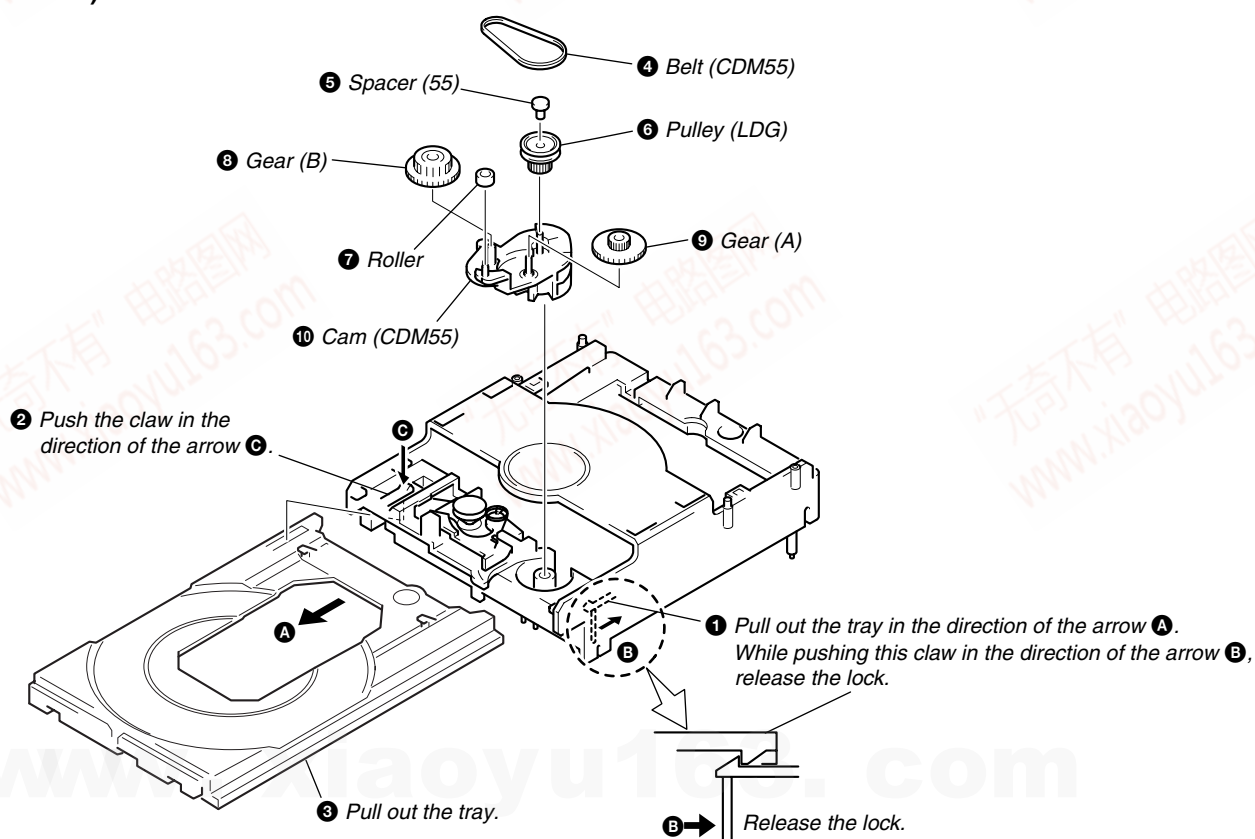


# HCD-J300

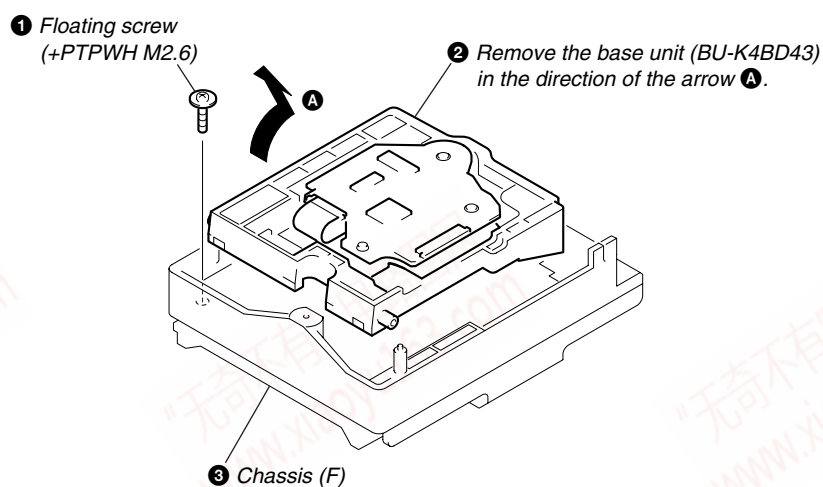
## CD MECHANISM DECK (CDM55F-K4BD43)



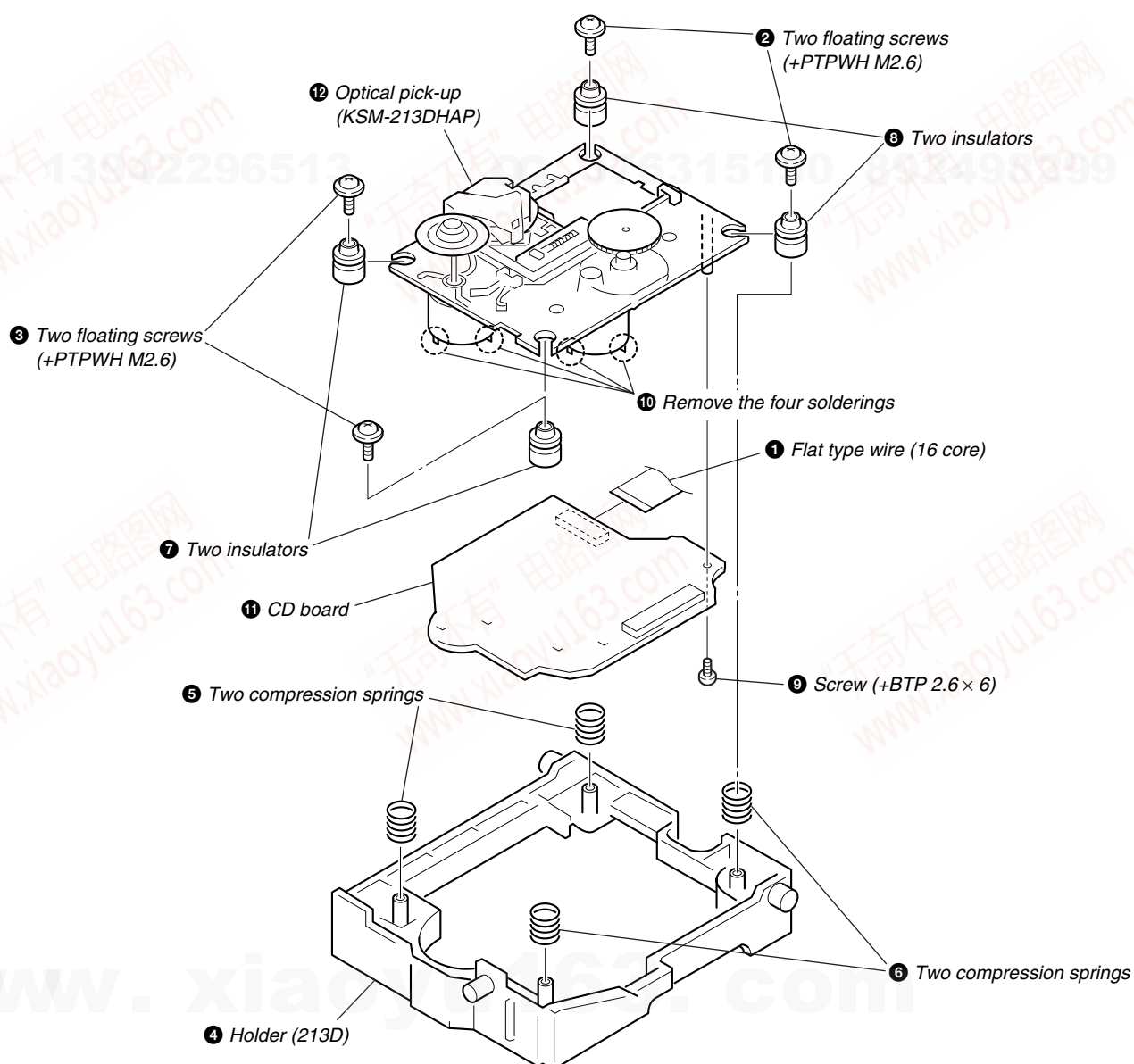
## CAM (CDM55)



# BASE UNIT (BU-K4BD43)



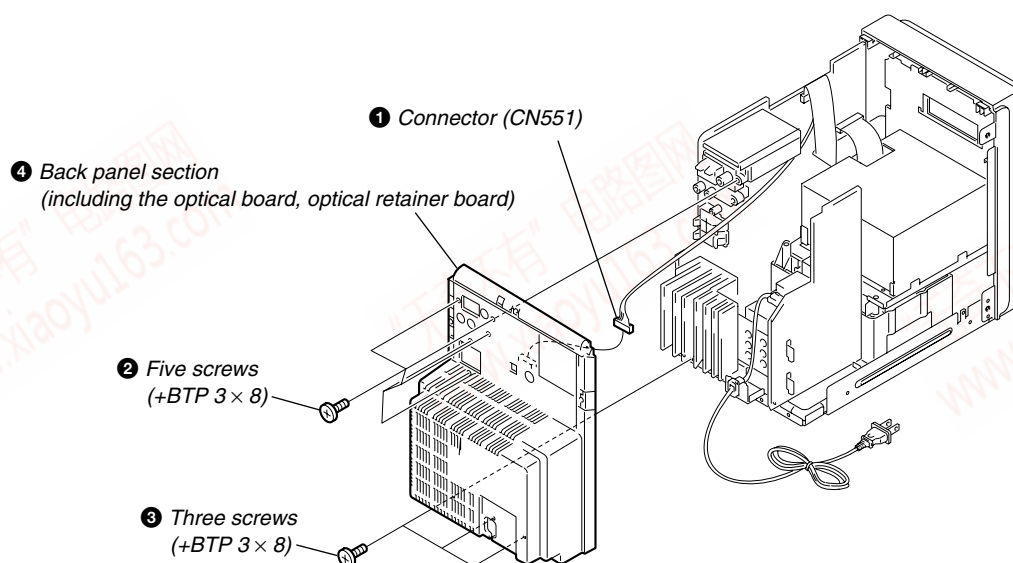
## OPTICAL PICK-UP (KSM-213DHAP)



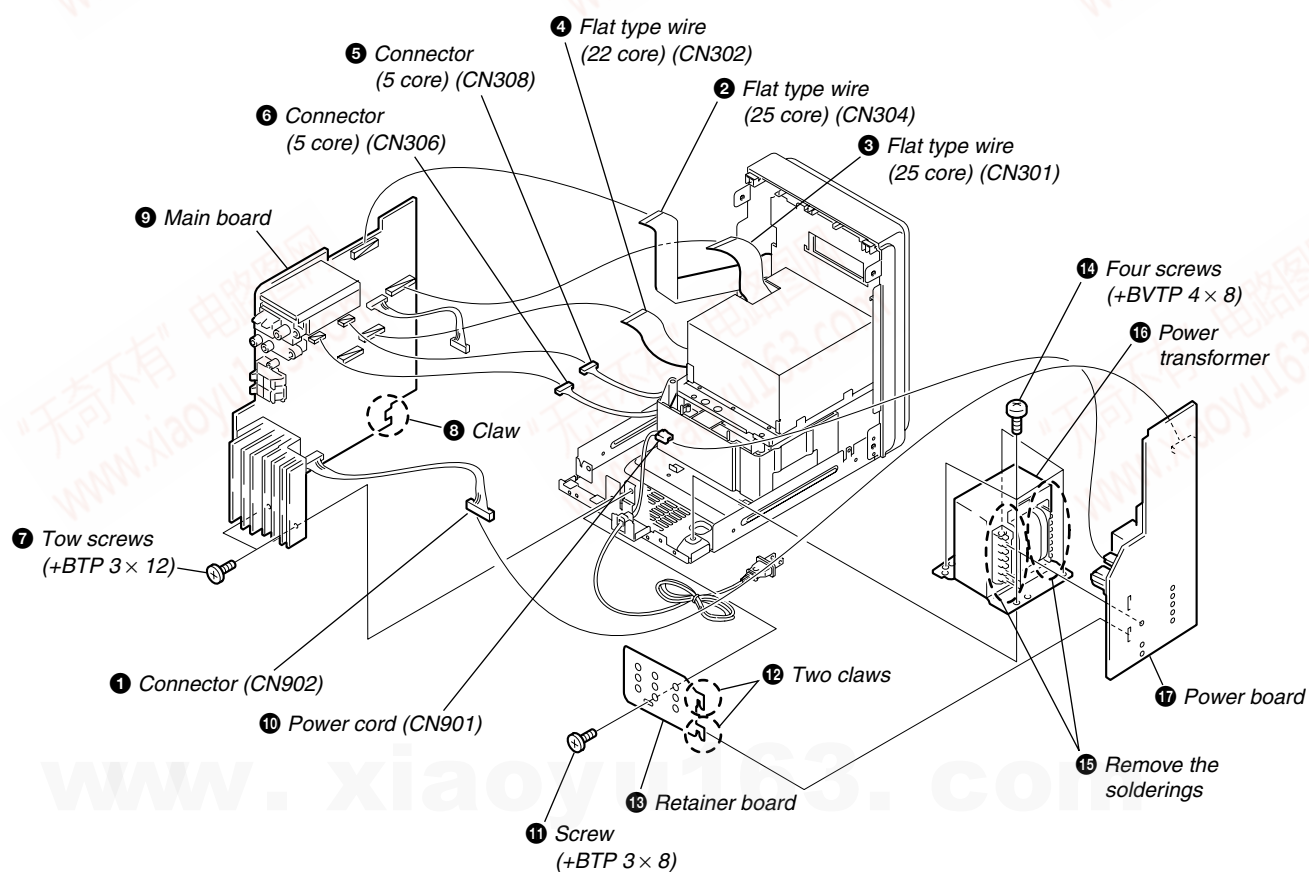


## HCD-J300

### BACK PANEL SECTION (INCLUDING THE OPTICAL BOARD, OPTICAL RETAINER BOARD)



### MAIN BOARD, POWER BOARD, POWER TRANSFORMER



## SECTION 4 TEST MODE

**Note 1:** About “R”

As this unit has only a few buttons, some operations require the use of remote commander (RM-SDC500/provided with unit: 1-476-756-11) buttons. These operations are indicated as “R” in this manual.

Example: **MENU/NO “R”** ...Press the **MENU/NO** button of the remote commander.

**Note 2:** Incorrect operations may be performed if the MD test mode is not entered properly.

In this case, press the **I/O** button to turn the power off, and retry to enter the MD test mode.

**[Cold Reset]**

- The cold reset clears all data including preset data stored in the RAM to initial conditions. Execute this mode when returning the set to the customers.

**Procedure:**

- Press **I/O** button to turn the set ON.
- Press three buttons **● MD**, **▶▶** (MD) and **■** (TAPE) simultaneously.
- Press **I/O** button again, the LCD displays “Initialize” and the set is reset.

- Initialized conditions

FUNCTION : TUNER FM 87.5MHz

VOLUME : MIN

DSG : ON

**[PANEL Test Mode]**

- This mode is used to check the software version, LCD, LED and keyboard.

**Procedure:**

- Press three buttons **● MD**, **▶▶** (MD) and **■** (TAPE) simultaneously.
- LEDs and LCD are all turned on.
- When you want to enter the software version display mode, press **REPEAT**. The model name and destination are displayed and “MD” and “CD” segments flash.
- Each time **REPEAT** is pressed, the display changes MC, GC, CD, CDD, CDMA, CDMB, BDA, BDB, ST, TA, TM, TC and MD in this order, and returns to the top of the version display.
- When **REC MODE** is pressed while the version numbers are being displayed, year, month and day of the software creation appear. When **REC MODE** is pressed again, the display returns to the software version display. When **REPEAT** is pressed while year, month and day of the software creation are being displayed, the year, month and day of creation of the software versions are displayed in the same order of version display.
- Press **PLAYMODE / DIRECTION** button, and the key check mode is activated. In the key check mode, the LCD displays “K 0 J 0 V 0”. Each time a button is pressed, “K 0” value increases. However, once a button is pressed, it is no longer taken into account. “V 0” value increases like 1, 2, 3.... if rotating **VOLUME** knob clockwise, or it decreases like 0, 9, 8.... if rotating counter-clockwise.
- To exit from this mode, press three buttons in the same manner as step 1, or disconnect the power cord.



**[MC Test Mode]**

- This mode is used to check operations of the respective sections of Amplifier, Tuner, CD and Tape.


**Procedure:**

- Press the **I/O** button to turn on the set.
- Press the three buttons **SYNCHRO REC**, **▶▶** (MD) and **■** (TAPE) simultaneously.
- The “MD” and “TAPE” segments flash.
- When the **VOLUME** knob is rotated clockwise even slightly, the sound volume increases to its maximum and a message “VOLUME MAX” appears for two seconds. then the display returns to the original display.
- When the **VOLUME** knob is rotated counter-clockwise even slightly, the sound volume decreases to its minimum and a message “VOLUME MIN” appears for two seconds, then the display returns to the original display.
- To exit from this mode, press three buttons **● MD**, **▶▶** (MD) and **■** (TAPE) simultaneously or disconnect the power cord.

**MD SECTION**
**1. PRECAUTIONS FOR USE OF TEST MODE**










- As operations related to loading will be performed regardless of the test mode operations being performed, be sure to check that the disc is stopped before setting and removing it.  
Even if the  (MD) button is pressed while the disc is rotating during continuous playback, continuous recording, etc., the disc will not stop rotating.  
Therefore, it will be ejected while rotating.  
Be sure to press the  (MD) button after pressing the **MENU/NO "R"** button and the rotation of disc is stopped.

**1-1. Recording laser emission mode and operating buttons**

- Continuous recording mode (CREC 1MODE)
- Laser power check mode (LDPWR CHECK)
- Laser power adjustment mode (LDPWR ADJUST)
- Comparison with initial Iop value written in nonvolatile memory (Iop Compare)
- Write current Iop value in read nonvolatile memory using microprocessor (Iop NV Save)
- Traverse (MO) check (EF MO CHECK)
- Traverse (MO) adjustment (EF MO ADJUST)
- When pressing the  MD button.

**2. SETTING THE TEST MODE**

The following are two methods of entering the test mode.

- Procedure :**
- Press the  button to turn the power on.
  - Press the **FUNCTION** button to set the MD function.
  - Press three buttons of , , and **SYNCHRO REC** simultaneously.  
When the test mode is set, "[Check]" will be displayed. Pressing the  "R" or  "R" button between the following three groups; ... [Check]  [Service]  [Develop]  ...

**Note:** Do not use the test mode in the [Develop] group.

If used, the unit may not operate normally.

If the [Develop] group is set accidentally, press the **MENU/NO "R"** button immediately to exit the [Develop] group.



**3. RELEASING THE TEST MODE**

Press the **REPEAT STEREO/MONO** button twice to display "Initialize", then release the MD test mode.

**4. BASIC OPERATIONS OF THE TEST MODE**

All operations are performed using the  "R",  "R", **ENTER/YES "R"** and **MENU/NO "R"**.

The functions of these buttons are as follows.

Function name	Function
 "R",  "R" buttons	Changes parameters and modes
<b>ENTER/YES "R"</b> button	Proceeds onto the next step. Finalizes input
<b>MENU/NO "R"</b> button	Returns to previous step. Stops operations

## 5. SELECTING THE TEST MODE

There are 26 types of test modes as shown below. The groups can be switched by pressing the **◀◀ "R"** or **▶▶ "R"** button. After selecting the group to be used, press the **ENTER/YES "R"** button. After setting a certain group, pressing the **◀◀ "R"** or **▶▶ "R"** button switches modes shown below.

Refer to "Group" in the table for details can be selected.

All items used for servicing can be treated using group [Service]. So be carefully not to enter other groups by mistake.

**Note:** Do not use the test mode in the [Develop] group.

If used, the unit may not operate normally.

If the [Develop] group is set accidentally, press the **MENU/NO "R"** button immediately to exit the [Develop] group.

Display	No.	Details	Mark	Group	
				Check	Service
AUTO CHECK	C01	Automatic self-diagnosis			○
Err Display	C02	Error history display, clear			○
TEMP ADJUST	C03	Temperature compensation offset adjustment			○
LDPWR ADJUST	C04	Laser power adjustment			○
Iop Write	C05	Iop data writing			○
Iop NV Save	C06	Writes current Iop value in read nonvolatile memory using microprocessor			○
EF MO ADJUST	C07	Traverse (MO) adjustment			○
EF CD ADJUST	C08	Traverse (CD) adjustment			○
FBIAS ADJUST	C09	Focus bias adjustment			○
AG Set (MO)	C10	Auto gain output level adjustment (MO)			○
AG Set (CD)	C11	Auto gain output level adjustment (CD)			○
TEMP CHECK	C12	Temperature compensation offset check		○	○
LDPWR CHECK	C13	Laser power check		○	○
EF MO CHECK	C14	Traverse (MO) check		○	○
EF CD CHECK	C15	Traverse (CD) check		○	○
FBIAS CHECK	C16	Focus bias check		○	○
ScurveCHECK	C17	S-curve check	×	○	
VERIFYMODE	C18	Nonvolatile memory check	×	○	
DETRK CHECK	C19	Detrack check	×	○	
0920 CHECK	C25	Most circumference check	×	○	
Iop Read	C26	Iop data display		○	○
Iop Compare	C27	Comparison with initial Iop value written in nonvolatile memory		○	○
ADJ CLEAR	C28	Initialization of nonvolatile memory for adjustment values			○
INFORMATION	C31	Display of microprocessor version, etc.		○	○
CPLAY 1MODE	C34	Continuous playback mode		○	○
CREC 1MODE	C35	Continuous recording mode		○	○

- For details of each adjustment mode, refer to "Section 6 Electrical Adjustments".  
For details of "Err Display", refer to "Self-Diagnosis Function" on page 3.
- If a different mode has been selected by mistake, press the **MENU/NO "R"** button to release that mode.
- Modes with (×) in the Mark column are not used for servicing and therefore are not described in detail. If these modes are set accidentally, press the **MENU/NO "R"** button to release the mode immediately.



## 5-1. Operating the Continuous Playback Mode

1. Entering the continuous playback mode
  - (1) Set the disc in the unit. (Whichever recordable discs or discs for playback only are available)
  - (2) Press the **◀◀ "R"** or **▶▶ "R"** button to display "CPLAY 1MODE" (C34).
  - (3) Press the **ENTER/YES "R"** button to change the display to "CPLAY1MID".
  - (4) When access completes, the display changes to "C = 0000 AD = 00".
2. Changing the parts to be played back
  - (1) Press the **ENTER/YES "R"** button during continuous playback to change the display as below.

"CPLAY 1MID" → "CPLAY 1OUT" → "CPLAY 1IN"

When pressed another time, the parts to be played back can be moved.

- (2) When access completes, the display changes to "C = 0000 AD = 00".
- Note:** The numbers "00" displayed show you error rates and ADER.
3. Ending the continuous playback mode
  - (1) Press the **MENU/NO "R"** button. The display will change to "CPLAY 1MODE" (C34).
  - (2) Press the **▲ (MD)** button and take out the disc.

**Note:** The playback start addresses for IN, MID, and OUT are as follows.

IN : 40h cluster  
MID : 300h cluster  
OUT : 700h cluster

## 5-2. Operating the Continuous Recording Mode (Use only when performing self-recording/palyback check)

1. Entering the continuous recording mode
  - (1) Set a recordable disc in the unit.
  - (2) Press the **◀◀ "R"** or **▶▶ "R"** button to display "CREC 1MODE" (C35).
  - (3) Press the **ENTER/YES "R"** button to change the display to "CREC 2MID".
  - (4) When access completes, the display changes to "CREC (10000)" and "● MD" lights up.
2. Changing the parts to be recorded
  - (1) When the **ENTER/YES "R"** button is pressed during continuous recording, the display changes as below.

"CREC 1MID" → "CREC 1OUT" → "CREC 1IN"

When pressed another time, the parts to be recorded can be changed. "● MD" goes off.

- (2) When access completes, the display changes to "CREC (10000)" and "● MD" lights up.
- Note:** The numbers "00" displayed shows you the recording position addresses.
3. Ending the continuous recording mode
  - (1) Press the **MENU/NO "R"** button. The display changes to "CREC 1MODE" (C35) and "● MD" goes off.
  - (2) Press the **▲ (MD)** button and take out the disc.

**Note 1:** The recording start addresses for IN, MID, and OUT are as follows.

IN : 40h cluster  
MID : 300h cluster  
OUT : 700h cluster

**Note 2:** The **MENU/NO "R"** button can be used to stop recording anytime.

**Note 3:** Do not perform continuous recording for long periods of time above 5 minutes.

**Note 4:** During continuous recording, be careful not to apply vibration.

## 6. FUNCTIONS OF OTHER BUTTONS

Function	Contents
▶▶ MD	Sets continuous playback when this is pressed in the STOP state. When this is pressed during continuous playback, playback position moves.
■ (MD)	Stops continuous playback and continuous recording
▶▶ "R"	The sled moves to the outer circumference only when this is pressed
◀◀ "R"	The sled moves to the inner circumference only when this is pressed
PLAY MODE	Switches the spindle servo mode (CLV S ↔ CLV A)
REC MODE	Switches the displayed digit each time the button is pressed
MD ▲	Ejects the disc
REPEAT STEREO/MONO	Releases the test mode



## 8. AUTOMATIC SELF-DIAGNOSIS FUNCTION

This test mode performs CREC and CPLAY automatically for mainly checking the characteristics of the optical pick-up.

To perform this test mode, the laser power must first be checked.

Perform AUTO CHECK after the laser power check and Iop Compare.

### Procedure:

1. Press the **◀◀ "R"** or **▶▶ "R"** button to display "AUTO CHECK" (C01).
2. Press the **ENTER/YES "R"** button. If "LDPWR ミチェック" is displayed, it means that the laser power check has not been performed. In this case, perform the laser power check and Iop Compare, and then repeat from enter the MD test mode.
3. If a disc is in the mechanical deck, it will be ejected forcibly. "DISC IN" will be displayed in this case. Load a test disc (MDW-74/GA-1) which can be recorded.
4. If a disc is loaded at step 3, the check will start automatically.
5. When "XX CHECK" is displayed, the item corresponding to XX will be performed. When "06 CHECK" completes, the disc loaded at step 3 will be ejected. "DISC IN" will be displayed. Load the check disc (TDYS-1).
6. When the disc is loaded in step 5, the check will automatically be resumed from "07 CHECK".
7. After completing to "0C CHECK" of test item 12, check OK or NG will be displayed. If all items are OK, "CHK ALL OK" will be displayed. If any item is NG, it will be displayed as "NG:xxxx".

When "CHK ALL OK" is displayed, it means that the optical pick-up is normal. Check the operations of other parts (spindle motor, sled motor, etc.).

When displayed as "NG:xxxx", it means that the optical pick-up is faulty. In this case, replace the optical pick-up.

## 9. INFORMATION

Display the software version.

### Procedure:

1. Press the **◀◀ "R"** or **▶▶ "R"** button to display "INFORMATION" (C31).
2. Press the **ENTER/YES "R"** button.
3. The software version will be displayed.
4. Press the **MENU/NO "R"** button to end this mode.

## 10. IOP DATA RECORDING AND DISPLAY WHEN OPTICAL PICK-UP AND NON-VOLATILE MEMORY (IC195 OF BD BOARD) ARE REPLACED

The IOP value labeled on the optical pick-up can be recorded in the non-volatile memory. By recording the value, it will eliminate the need to look at the value on the label of the optical pick-up. When replacing the optical pick-up or non-volatile memory (IC195 of BD (MD) board), record the IOP value on the optical pick-up according to the following procedure.

### Record Procedure:

1. Press the **I/⏻** button to turn the power on.
2. Press the **FUNCTION** button to set the MD function.
3. Press three buttons of **■** (MD), **◀◀** (TAPE) and **SYNCHRO REC** simultaneously to enter the MD test mode and display "[Check]".
4. Press the **◀◀ "R"** or **▶▶ "R"** button to display "[Service]".
5. Press the **ENTER/YES "R"** button to display "AUTO CHECK", and press the **▶▶ "R"** button to display "Iop Write".
6. Press the **ENTER/YES "R"** button.
7. The display becomes "Ref= @@@.@@" (@ is an arbitrary number) and the numbers which can be changed will blink.
8. Input the IOP value written on the optical pick-up.  
To select the number : Press the **◀◀ "R"** or **▶▶ "R"** button.  
To select the digit : Press the **REC MODE** button.
9. When the **ENTER/YES "R"** button is pressed, the display becomes "Measu= @@@.@@" (@ is an arbitrary number).
10. As the adjustment results are recorded for the step 9 value. Leave it as it is and press the **ENTER/YES "R"** button.
11. "Complete!" will be displayed momentarily. The value will be recorded in the non-volatile memory and the display will become "Iop Write".
12. Press the **REPEAT STEREO/MONO** button twice to complete. "Initialize" will be displayed and release the MD test mode.

### Display Procedure:






1. Press the **I/⏻** button to turn the power on.
2. Press the **FUNCTION** button to set the MD function.
3. Press three buttons of **■** (MD), **◀◀** (TAPE) and **SYNCHRO REC** simultaneously to enter the MD test mode and display "[Check]".
4. Press the **◀◀ "R"** or **▶▶ "R"** button to display "[Service]".
5. Press the **ENTER/YES "R"** button to display "AUTO CHECK", and press the **▶▶ "R"** button to display "Iop Read".
6. Press the **ENTER/YES "R"** button.
7. "@@.@/##.#" is displayed and the recorded contents are displayed.  
@@.@ : Indicates the Iop value labeled on the pick-up.  
##.# : Indicates the Iop value after adjustment.
8. Press the **REPEAT STEREO/MONO** button twice to complete. "Initialize" will be displayed and release the MD test mode.

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## 11. WHEN MEMORY NG IS DISPLAYED

If the nonvolatile memory data is abnormal, “E001 MEMORY NG” will be displayed so that the MD deck does not continue operations. In this case, set the test mode promptly and perform the following procedure.

### Procedure:

1. Enter the MD test mode.
2. Normally a message for selecting the test mode will be displayed. However if the nonvolatile memory is abnormal, the following will be displayed “INIT EEP?”.
3. Press the  (MD) and  (MD) buttons simultaneously.
4. Press the  “R” or  “R” button to display “MDM-7B”.
5. Press the  button. If the nonvolatile memory is successfully overwritten, the normal MD test mode will be set and a message to select the MD test mode will be displayed.

## 12. CHECKS PRIOR TO PARTS REPLACEMENT AND ADJUSTMENTS IN MD

Before performing repairs, perform the following checks to determine the faulty locations up to a certain extent. Details of the procedures are described in “Section 6 Electrical Adjustments”.

	Criteria for Determination (Unsatisfactory if specified value is not satisfied)	Measure if unsatisfactory
Laser power check (6-2 : See page 32)	<ul style="list-style-type: none"> <li>• 0.9 mW power Specified value : figure1</li> <li>• 7.0 mW power Specified value : figure2</li> </ul>	<ul style="list-style-type: none"> <li>• Clean the optical pick-up</li> <li>• Adjust again</li> <li>• Replace the optical pick-up</li> </ul>
	<ul style="list-style-type: none"> <li>• Iop (at 8.4mW)</li> <li>• Labeled on the optical pick-up</li> <li>• Iop value <math>\pm 10\text{mA}</math></li> </ul>	<ul style="list-style-type: none"> <li>• Replace the optical pick-up</li> </ul>
Auto check (6-7 : See page 33)	<ul style="list-style-type: none"> <li>• Unsatisfactory if displayed as “NG : XXXX”NG (XXXX are arbitrary numbers)</li> </ul>	<ul style="list-style-type: none"> <li>• Replace the optical pick-up</li> </ul>
Temperature compensation offset check (6-1 : See page 32)	<ul style="list-style-type: none"> <li>• Unsatisfactory if displayed as “T=@ @ (##) [NG]” NG (@ @, ## are both arbitrary numbers)</li> </ul>	<ul style="list-style-type: none"> <li>• Check for disconnection of the circuits around D101 (BD board)</li> <li>• Check the signals around IC101, IC151, CN102, CN103 (BD board)</li> </ul>

### Note:

The criteria for determination above is intended merely to determine if satisfactory or not, and does not serve as the specified value for adjustments. When performing adjustments, use the specified values for adjustments.

Figure1:

SPECIFIED VALUE	KMS-260B	0.85 to 0.91 mW
	KMS-260E	0.90 to 0.96 mW

Figure2:





SPECIFIED VALUE	KMS-260B	6.8 to 7.2 mW
	KMS-260E	7.0 to 7.5 mW








## CD SECTION

### [CD SERVO Test Mode]

- Use this mode when checking CD servo.

### Procedure:

1. Press  button to turn the set ON.
2. Select the function “CD”.
3. Press three buttons  (TAPE),  and  (MD) simultaneously.
4. Press the appropriate button for the following tests.

Button	Function	Button	Function
 (CD)	TEST 1	PLAY MODE DIRECTION	TEST 6
 (CD)	TEST 2	 (CD)	TEST 7
 (TAP)	TEST 3	 (MD)	TEST 8
 (L)	TEST 4	 (TAPE)	TEST 9
REPEAT	TEST 5		

5. To exit from this mode, turn off the set.

## SECTION 5 MECHANICAL ADJUSTMENTS

### Precaution

- Clean the following parts with a denatured alcohol-moistened swab:
 

record/playback heads	pinch rollers
erase head	rubber belts
capstan	idlers
- Demagnetize the record/playback head with a head demagnetizer.
- Do not use a magnetized screwdriver for the adjustments.
- The adjustments should be performed with the rated power supply voltage unless otherwise noted.

### Torque Measurement

Mode	Torque meter	Meter reading
FWD	CQ-102C	3.04 – 6.96 N • m (31 to 71 g • cm) (0.43 – 0.98 oz • inch)
FWD back tension	CQ-102C	0.20 – 0.58 N • m (2 to 6 g • cm) (0.02 – 0.08 oz • inch)
REV	CQ-102RC	3.04 – 6.96 N • m (31 to 71 g • cm) (0.43 – 0.98 oz • inch)
REV back tension	CQ-102RC	0.20 – 0.58 N • m (2 to 6 g • cm) (0.02 – 0.08 oz • inch)
FF/REW	CQ-201B	6.97 – 14.02 N • m (71 to 143 g • cm) (0.98 – 1.99 oz • inch)
FWD tension	CQ-403A	0.98 N • m or more (100 g or more) (3.53 oz or more)
REV tension	CQ-403R	0.98 N • m or more (100 g or more) (3.53 oz or more)

## SECTION 6 ELECTRICAL ADJUSTMENTS

### DECK SECTION

0 dB=0.775V

- Demagnetize the record/playback head with a head demagnetizer.
- Do not use a magnetized screwdriver for the adjustments.
- After the adjustments, apply suitable locking compound to the parts adjusted.
- The adjustments should be performed with the rated power supply voltage unless otherwise noted.
- The adjustments should be performed in the order given in this service manual. (As a general rule, playback circuit adjustment should be completed before performing recording circuit adjustment.)
- The adjustments should be performed for both L-CH and R-CH.
- Switches and controls should be set as follows unless otherwise specified.

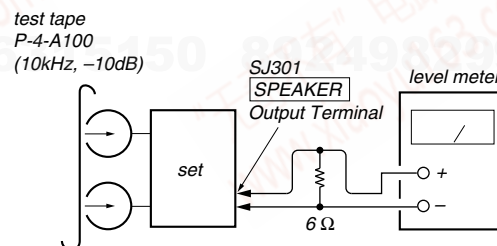
Tape	Signal	Used for
P-4-A100	10 kHz, -10 dB	Azimuth Adjustment
WS-48B	3 kHz, 0 dB	Tape Speed Adjustment
P-4-L300	315 Hz, 0 dB	Level Adjustment

**Note:** Standard Volume Point is +10 dBs at SPEAKER Output Level (6Ω load resistance) during playbacking P-4-L300 Test Tape. (DSG OFF, TREBLE/BASS CENTER)

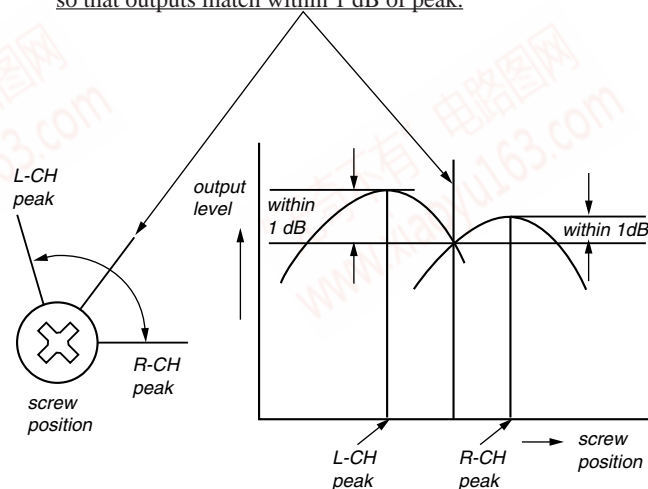
### Record/Playback Head Azimuth Adjustment

#### Procedure:

- Mode : Playback

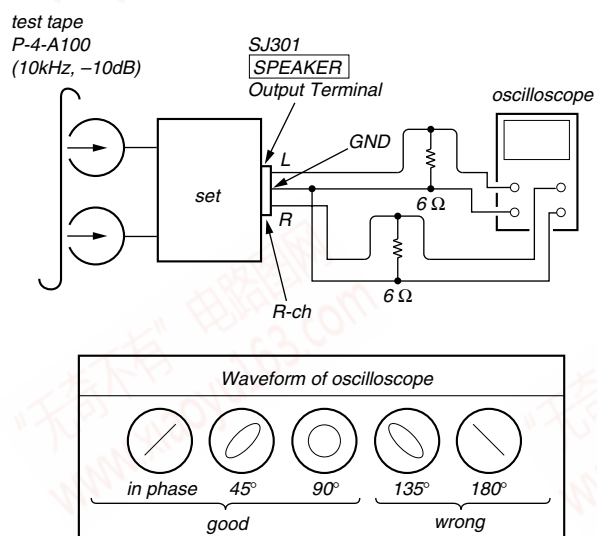


- Turn the adjustment screw and check output peaks. If the peaks do not match for L-CH and R-CH, turn the adjustment screw so that outputs match within 1 dB of peak.



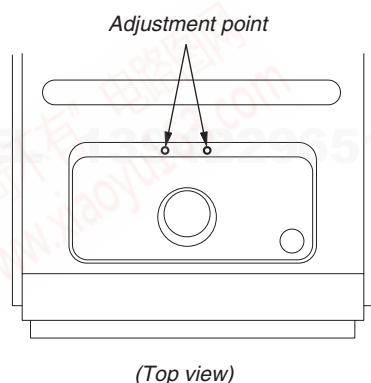
## HCD-J300

### 3. Mode: Playback



4. After the adjustments, apply suitable locking compound to the parts adjusted.

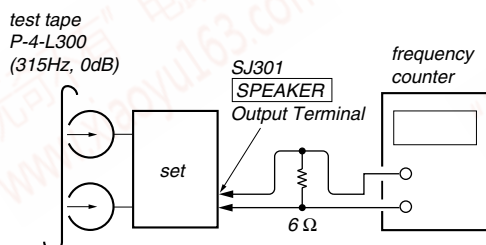
#### Adjustment Location:



### Tape Speed Check

#### Procedure:

1. MODE : Playback.



2. Insert the WS-48B into deck.  
3. Press the button of deck.  
4. Check the reading of frequency counter becomes  $3000 \pm 90$  Hz.

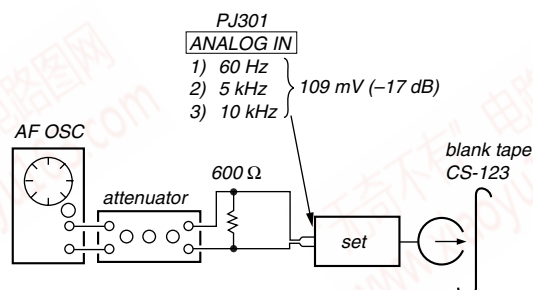
#### Sample Value of Wow and flutter

W.RMS (JIS) less than 0.35%  
(test tape: WS-48B)

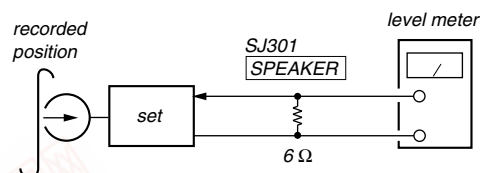
### Record Level Check

#### Procedure:

- Press **FUNCTION** button to select ANALOG IN. (This step is not necessary if the above test mode has already been set.)
- Insert a tape into deck, press the **REC** (TAPE) button, and then press the **REW** (TAPE) button to start recording.
- Mode: Record



4. Mode: Playback



5. The playback output level should be  $-4.5 \pm 3$  dB (60 Hz),  $1 \pm 3$  dB (8 kHz) and  $-3 \pm 3$  dB (10 kHz).

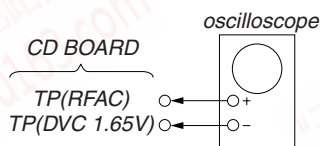


## CD SECTION

Note :

1. CD Block is basically designed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use an oscilloscope with more than 10MΩ impedance.
4. Clean the object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

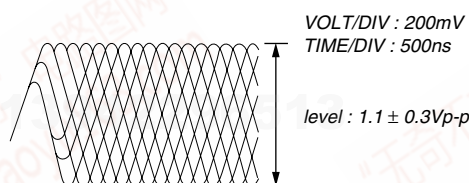
### RF Level Check



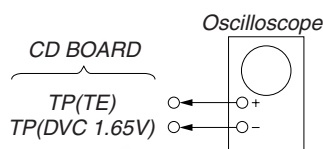
Procedure :

1. Connect oscilloscope to TP (RFAC).
2. Turned Power switch on.
3. Load a disc (YEDS-18) and playback.
4. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

**Note:** Clear RF signal waveform means that the shape “◇” can be clearly distinguished at the center of the waveform.

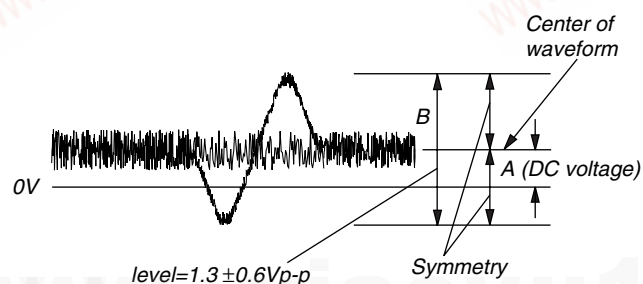


### E-F Balance (1 Track jump) Check



Procedure:

1. Connect oscilloscope to TP (TE) and TP (DVC 1.65V).
2. Turned Power switch on.
3. Load a disc (YEDS-18) and playback the number five track.
4. Press the [▶||] button. (Becomes the 1track jump mode.)
5. Confirm that the level B and A (DC voltage) on the oscilloscope waveform.

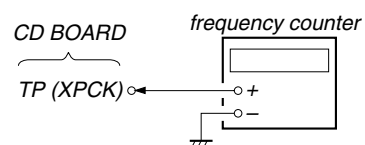


Specification level:  $\frac{A}{B} \times 100 = \text{less than } \pm 22\%$

## RF PLL Free-run Frequency

Procedure :

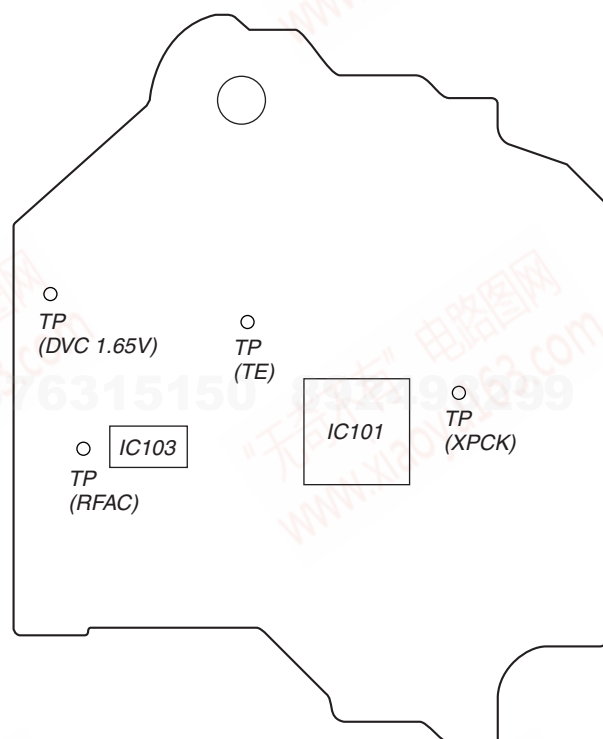
1. Connect frequency counter to TP (XPCK) with lead wire.



2. Turned Power switch on.
3. Put the disc (YEDS-18) in to play the number five track. Confirm that reading on frequency counter is 4.3218MHz.

Test Point Location :

[CD BOARD] — SIDE B —





MD SECTION

**Note 1:** About "R"

As this unit has only a few buttons, some operations require the use of remote commander (RM-SDC500/provided with unit: 1-476-756-11) buttons. These operations are indicated as "R" in this manual.

Example: **MENU/NO** "R" ...Press the **MENU/NO** button of the remote commander.

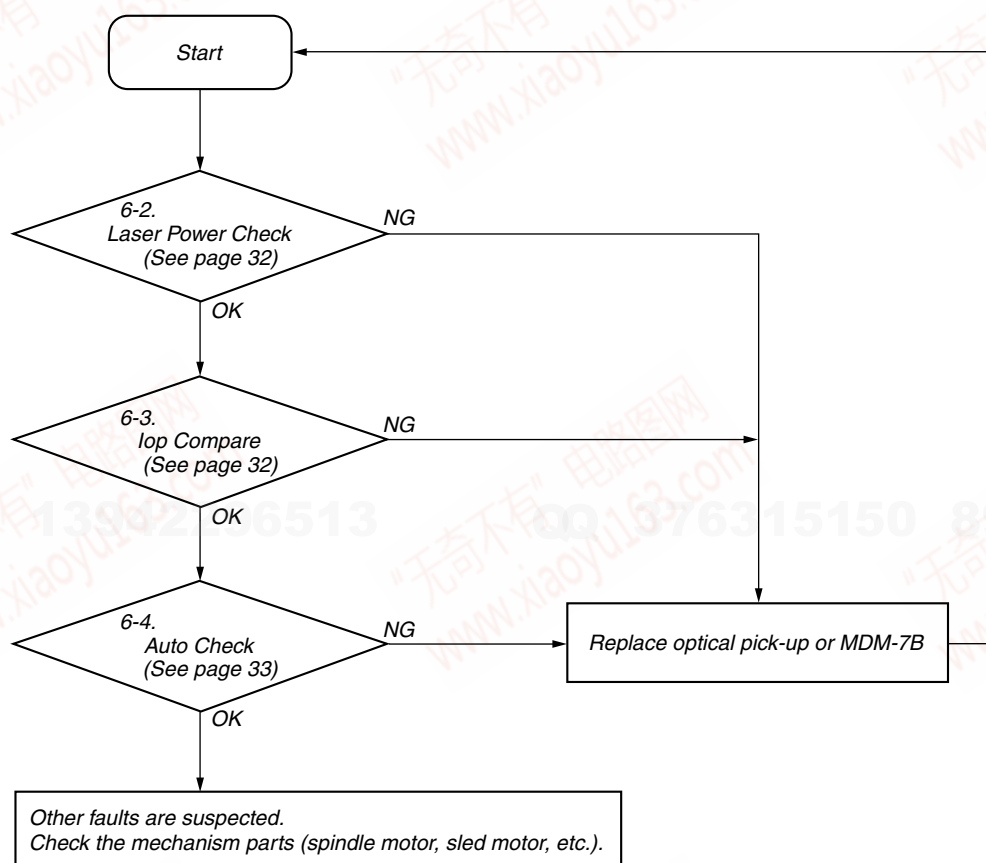
**Note 2:** Incorrect operations may be performed if the MD test mode is not entered properly.

In this case, press the **L/** button to turn the power off, and retry to enter the MD test mode.

## 1. PARTS REPLACEMENT AND ADJUSTMENT

If malfunctions caused by optical pick-up such as sound skipping are suspected, follow the following check.

### Check before replacement

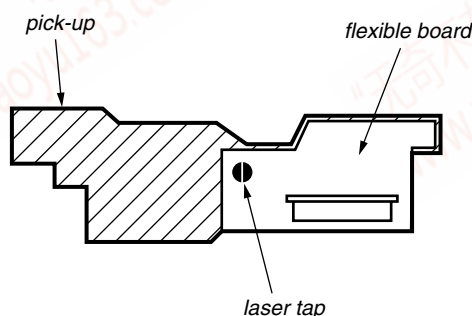


## 2. PRECAUTIONS FOR CHECKING LASER DIODE EMISSION

To check the emission of the laser diode during adjustments, never view directly from the top as this may lose your eyesight.

## 3. PRECAUTIONS FOR USE OF OPTICAL PICK-UP (KMS-260B/260E)

As the laser diode in the optical pick-up is easily damaged by static electricity, solder the laser tap of the flexible board when using it. Before disconnecting the connector, desolder first. Before connecting the connector, be careful not to remove the solder. Also take adequate measures to prevent damage by static electricity. Handle the flexible board with care as it breaks easily.



**Optical pick-up flexible board**

## 4. PRECAUTIONS FOR ADJUSTMENTS

- When replacing the following parts, perform the adjustments and checks with ○ in the order shown in the following table.
- Set the MD test mode when performing adjustments. After completing the adjustments, exit the MD test mode. Perform the adjustments and checks in "Group Service" of the MD test mode.
- Perform the adjustments to be needed in the order shown.
- Use the following tools and measuring devices.
  - Check Disc (TD YS-1) (Part No. : 4-963-646-01)
  - Test Disk (MD W-74/GA-1) (Part No. : 4-229-747-01)
  - Laser power meter LPM-8001 (Part No. : J-2501-046-A) or MD Laser power meter 8010S (Part No. : J-2501-145-A)\*<sup>1</sup>
  - Oscilloscope (Measure after performing CAL of probe.)
  - Digital voltmeter
  - Thermometer
  - Jig for checking BD board deformation (Part No. : J-2501-196-A)

- When observing several signals on the oscilloscope, etc., make sure that VC and ground do not connect inside the oscilloscope. (VC and ground will become short-circuited.)
- Using the above jig enables the waveform to be checked without the need to solder. (Refer to Servicing Notes on page 8.)
- As the disc used will affect the adjustment results, make sure that no dusts nor fingerprints are attached to it.

### \*1 Laser power meter

When performing laser power checks and adjustment (electrical adjustment), use of the new MD laser power meter 8010S (Part No. J-2501-145-A) instead of the conventional laser power meter is convenient.

It sharply reduces the time and trouble to set the laser power meter sensor onto the objective lens of optical pick-up.

Adjustment	Parts to be replaced						
	Optical Pick-up	IC101	IC102	IC151	IC190	IC195	D101
7. Initial setting of adjustment value	○	×	×	×	×	○	×
8. Recording of Iop information	○	×	×	×	×	○	×
9. Temperature compensation offset adjustment	×	○	×	×	×	○	○
10. Laser power adjustment	○	×	×	×	○	○	×
11. Iop NV Save	○	×	○	×	○	○	×
12. Traverse adjustment	○	○	×	○	×	○	×
13. Focus bias adjustment	○	○	×	○	×	○	×
16. Auto gain adjustment	○	○	×	○	×	○	×
6-4. AUTO CHECK	○	○	×	○	○	○	×

## 5. USING THE CONTINUOUSLY RECORDED DISC

\* This disc is used in focus bias adjustment and error rate check.  
The following describes how to create a continuous recording disc.

1. Insert a disc (blank disc) commercially available.
2. Press the **◀◀"R"** or **▶▶"R"** button and display "CREC 1MODE" (C35).
3. Press the **ENTER/YES "R"** button again to display "CREC 1 MID".  
Display "CREC 1(0300)" and start to recording.
4. Complete recording within 5 minutes.
5. Press the **MENU/NO "R"** button and stop recording .
6. Press the **▲(MD)** button and remove the disc.

The above has been how to create a continuous recorded data for the focus bias adjustment and error rate check.

**Note:** Be careful not to apply vibration during continuous recording.

## 6. CHECKS PRIOR TO REPAIRS

These checks are performed before replacing parts according to "approximate specifications" to determine the faulty locations. For details, refer to "Checks Prior to Parts Replacement and Adjustments in MD" (see page 26).

### 6-1. Temperature Compensation Offset Check

When performing adjustments, set the internal temperature and room temperature to 22 to 28°C.

#### Procedure:

1. Press the **◀◀"R"** or **▶▶"R"** button to display "TEMP CHECK" (C12).
2. Press the **ENTER/YES "R"** button.
3. "T=@@ (##) [OK]" should be displayed. If "T=@@ (##) [NG]" is displayed, it means that the results are bad.  
(@@ indicates the current value set, and ## indicates the value written in the non-volatile memory.)

### 6-2. Laser Power Check

Before starting adjustment;

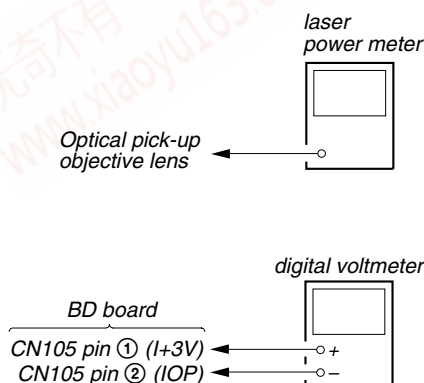
The laser power adjustment value changes depending upon the types of the optical pick-up (KMS-260B or KMS-260E).

Check the type of the optical pick-up before starting adjustment.  
(See the illustrations "The method of identifying the optical pick-up" on page 36)

Before checking, check the Iop value of the optical pick-up.

(Refer to 8. Recording and Displaying the Iop Information (see page 35))

#### Connection:



#### Procedure:

1. Set the laser power meter on the objective lens of the optical pick-up. (When it cannot be set properly, press the **◀◀"R"** button or **▶▶"R"** button to move the optical pick-up.)  
Connect the digital volt meter to CN105 pin ① (I+3V) and CN105 pin ② (IOP).
2. Then, press the **◀◀"R"** or **▶▶"R"** button and display "LDPWR CHECK" (C13).
3. Press the **ENTER/YES "R"** button once and display "LD 0.9mW\$0.00". Check that the reading of the laser power meter becomes specified value.

SPECIFIED VALUE	KMS-260B	0.85 to 0.91 mW
	KMS-260E	0.90 to 0.96 mW

4. Press the **ENTER/YES "R"** button once more and display "LD 8.4mW\$0.00". Check that the reading the laser power meter and digital volt meter satisfy the specified value.

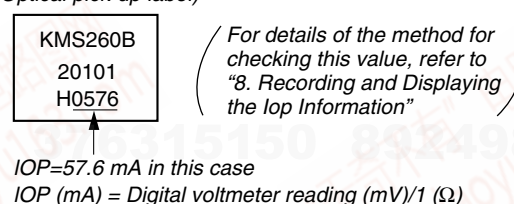
#### Specified Value:

Laser power meter reading :

KMS-260B	6.8 to 7.2 mW
KMS-260E	7.0 to 7.5 mW

Digital voltmeter reading : Optical pick-up displayed value  $\pm$  10%

(Optical pick-up label)



5. Press the **MENU/NO "R"** button and display "LDPWR CHECK" (C13) and stop the laser emission.  
(The **MENU/NO "R"** button is effective at all times to stop the laser emission.)

**Note:** After step 4, each time the **ENTER/YES "R"** button is pressed, the display will be switched to "LD 0.7W\$0.00" and "LD 7.5mW\$0.00" "LD WP ホセ イ \$0.00". Nothing needs to be performed here.

**Checking Location:** BD board (see page 39)

### 6-3. Iop Compare

The current Iop value at laser power 8.4 mW output and reference Iop value (set at shipment) written in the nonvolatile memory are compared, and the rate of increase/decrease will be displayed in percentage.

**Note:** Perform this function with the optical pick-up set at room temperature.

#### Procedure:

1. Press the **◀◀"R"** or **▶▶"R"** button to display "Iop Compare" (C27).
2. Press the **ENTER/YES "R"** button and start measurements.
3. When measurements complete, the display changes to " $\pm$  xx% yy".  
xx is the percentage of increase/decrease, and OK or NG is displayed at yy to indicate whether the percentage of increase/decrease is within the allowable range.
4. Press the **MENU/NO "R"** button to end.

#### 6-4. Auto Check

This test mode performs CREC and CPLAY automatically for mainly checking the characteristics of the optical pick-up. To perform this test mode, the laser power must first be checked. Perform Auto Check after the laser power check and Iop compare.

##### Procedure:

1. Press the **◀◀ "R"** or **▶▶ "R"** button to display "AUTO CHECK" (C01).
2. Press the **ENTER/YES "R"** button. If "LDPWR ミチェック" is displayed, it means that the laser power check has not been performed. In this case, perform the laser power check and Iop Compare, and then repeat from enter the MD test mode.
3. If a disc is in the mechanical deck, it will be ejected forcibly. "DISC IN" will be displayed in this case. Load a test disc (MDW-74/GA-1) which can be recorded.
4. If a disc is loaded at step 3, the check will start automatically.
5. When "XX CHECK" is displayed, the item corresponding to XX will be performed.  
When "06 CHECK" completes, the disc loaded at step 3 will be ejected. "DISC IN" will be displayed. Load the check disc (TDYS-1).
6. When the disc is loaded in the step 5, the check will automatically be resumed from "07 CHECK".
7. After completing to "0C CHECK" of test item 12, check OK or NG will be displayed. If all items are OK, "CHK ALL OK" will be displayed. If any item is NG, it will be displayed as "NG:xxxx".

When "CHK ALL OK" is displayed, it means that the optical pick-up is normal. Check the operations of other parts (spindle motor, sled motor, etc.).

When displayed as "NG:xxxx", it means that the optical pick-up is faulty. In this case, replace the optical pick-up.

#### 6-5. Other Checks

All the following checks are performed by the Auto Check mode. They therefore need not be performed in normal operation.

##### 6-6. Traverse Check

##### 6-7. Focus Bias Check

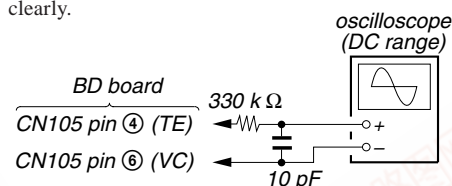
##### 6-8. C PLAY Check

##### 6-9. Self-Recording/Playback Check

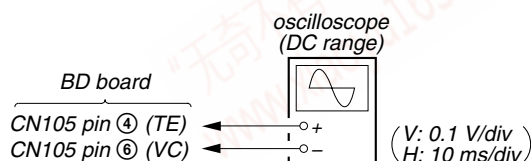
#### 6-6. Traverse Check

**Note 1:** Data will be erased during MO reading if a recorded disc is used in this adjustment.

**Note 2:** If the traverse waveform is not clear, connect the oscilloscope as shown in the following figure so that it can be seen more clearly.



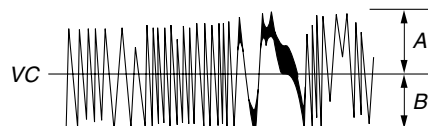
##### Connection:



##### Procedure:

1. Connect an oscilloscope to CN105 pin ④ (TE) and CN105 pin ⑥ (VC) on the BD board.
2. Load a disc (any available on the market). (Refer to Note 1)
3. Press the **▶▶ "R"** button to move the optical pick-up outside the pit.
4. Press the **◀◀ "R"** or **▶▶ "R"** button to display "EF MO CHECK" (C14).
5. Press the **ENTER/YES "R"** button to display "EFB = □□ MO-R".  
(Laser power READ power/Focus servo ON/tracking servo OFF/spindle (S) servo ON)
6. Observe the waveform of the oscilloscope, and check that the specified value is satisfied. Do not press the **◀◀ "R"** or **▶▶ "R"** button.  
(Read power traverse checking)

##### Traverse Waveform

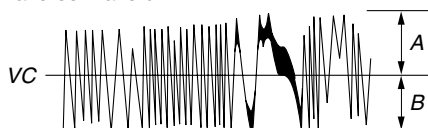


Specified value : Below 10% offset value

$$\text{Offset value (\%)} = \frac{|A - B|}{2(A + B)} \times 100$$

7. Press the **ENTER/YES "R"** button to display "EFB = □□ MO-W".
8. Observe the waveform of the oscilloscope, and check that the specified value is satisfied. Do not press the **◀◀ "R"** or **▶▶ "R"** button.  
(Write power traverse checking)

##### Traverse Waveform



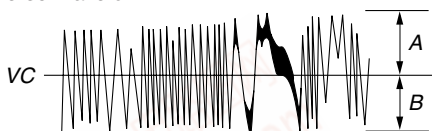
Specified value : Below 10% offset value

$$\text{Offset value (\%)} = \frac{|A - B|}{2(A + B)} \times 100$$



9. Press the **[ENTER/YES "R"]** button to display "EFB = **00** MO-P".  
Then, the optical pick-up moves to the pit area automatically and servo is imposed.
10. Observe the waveform of the oscilloscope, and check that the specified value is satisfied. Do not press the **[◀◀ "R"]** or **[▶▶ "R"]** button.

Traverse Waveform

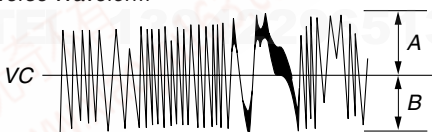


Specified value : Below 10% offset value

$$\text{Offset value (\%)} = \frac{|A - B|}{2(A + B)} \times 100$$

11. Press the **[ENTER/YES "R"]** button to display "EF MO CHECK" (C14).  
The disc stops rotating automatically.
12. Press the **[▲] (MD)** button and take out the disc.
13. Load the check disc (TDYS-1).
14. Press the **[◀◀ "R"]** or **[▶▶ "R"]** button and display "EF CD CHECK" (C15).
15. Press the **[ENTER/YES "R"]** button to display "EFB = **00** CD".  
Servo is imposed automatically.
16. Observe the waveform of the oscilloscope, and check that the specified value is satisfied. Do not press the **[◀◀ "R"]** or **[▶▶ "R"]** button.

Traverse Waveform



Specified value : Below 10% offset value

$$\text{Offset value (\%)} = \frac{|A - B|}{2(A + B)} \times 100$$

17. Press the **[ENTER/YES "R"]** button to display "EF CD CHECK" (C15).
18. Press the **[▲] (MD)** button and take out the check disc (TDYS-1).

Checking Location: BD board (see page 39)

## 6-7. Focus Bias Check

Change the focus bias and check the focus tolerance amount.

### Procedure:

1. Load the test disc (MDW-74/GA-1).
2. Press the **[◀◀ "R"]** or **[▶▶ "R"]** button to display "CPLAY 1MODE" (C34).
3. Press the **[ENTER/YES "R"]** button to display "CPLAY 1MID".
4. Press the **[MENU/NO "R"]** button when "C = **00** AD = **00**" is displayed.
5. Press the **[◀◀ "R"]** or **[▶▶ "R"]** button to display "FBIAS CHECK" (C16).
6. Press the **[ENTER/YES "R"]** button to display "**0000/00** c = **00**".  
The first four digits indicate the C1 error rate, the two digits after [/] indicate ADER, and the 2 digits after [c =] indicate the focus bias value.  
Check that the C1 error is below 20 and ADER is below 2.
7. Press the **[ENTER/YES "R"]** button to display "**0000/00** b = **00**".  
Check that the C1 error is about 200 and ADER is below 2.
8. Press the **[ENTER/YES "R"]** button to display "**0000/00** a = **00**".  
Check that the C1 error is about 200 and ADER is below 2.
9. Press the **[MENU/NO "R"]** button, then press the **[▲] (MD)** button and take out the test disc.

## 6-8. C PLAY Check

### MO Error Rate Check

#### Procedure:

1. Load the test disc (MDW-74/GA-1).
2. Press the **[◀◀ "R"]** or **[▶▶ "R"]** button to display "CPLAY 1MODE" (C34).
3. Press the **[ENTER/YES "R"]** button to display "CPLAY 1MID".
4. The display changes to "C = **0000** AD = **00**".
5. If the C1 error rate is below 50, check that ADER is 00.
6. Press the **[MENU/NO "R"]** button to stop playback, then press the **[▲] (MD)** button and take out the test disc.

### CD Error Rate Check

#### Procedure:

1. Load the check disc (TDYS-1).
2. Press the **[◀◀ "R"]** or **[▶▶ "R"]** button to display "CPLAY 1MODE" (C34).
3. Press the **[ENTER/YES "R"]** button to display "CPLAY 1MID".
4. The display changes to "C = **0000** AD = **00**".
5. Check that the C1 error rate is below 50.
6. Press the **[MENU/NO "R"]** button to stop playback, then press the **[▲] (MD)** button and take out the check disc.

## 6-9. Self-Recording/playback Check

Prepare a continuous recording disc using the unit to be repaired and check the error rate.

### Procedure:

1. Load a recordable disc (blank disc).
2. Press the **[◀◀ "R"]** or **[▶▶ "R"]** button to display "CREC 1MODE" (C35).
3. Press the **[ENTER/YES "R"]** button to display "CREC 1MID".
4. When recording starts, lights up "**●MD**" and display "CREC 1 (@@@@)" (@@@@ is the address).
5. About 1 minute later, press the **[MENU/NO "R"]** button to stop continuous recording.
6. Press the **[◀◀ "R"]** or **[▶▶ "R"]** button to display "CPLAY 1MODE" (C34).
7. Press the **[ENTER/YES "R"]** button to display "CPLAY 1MID".
8. "C = **0000** AD = **00**" will be displayed.
9. Check that the C1 error becomes below 50 and the AD error below 2.
10. Press the **[MENU/NO "R"]** button to stop playback, then press the **[▲] (MD)** button and take out the disc.



## 7. INITIAL SETTING OF ADJUSTMENT VALUE

### Note:

Mode which sets the adjustment results recorded in the non-volatile memory to the initial setting value. However the results of the temperature compensation offset adjustment will not change to the initial setting value.

If initial setting is performed, perform all adjustments again excluding the temperature compensation offset adjustment.

For details of the initial setting, refer to "4. Precautions for Adjustments" (See page 31) and execute the initial setting before the adjustment as required.

### Procedure:

1. Press the **◀◀ "R"** or **▶▶ "R"** button to display "ADJ CLEAR" (C28).
2. Press the **ENTER/YES "R"** button. "Complete!" will be displayed momentarily and initial setting will be executed, after which "ADJ CLEAR" (C28) will be displayed.

## 8. RECORDING AND DISPLAYING THE IOP INFORMATION

The IOP data can be recorded in the non-volatile memory. The IOP value on the optical pick-up label and the IOP value after the adjustment will be recorded. Recording these data eliminates the need to read the label on the optical pick-up.

### Recording Procedure:

1. Press the **◀◀ "R"** or **▶▶ "R"** button to display "Iop Write" (C05), and press the **ENTER/YES "R"** button.
2. The display becomes "Ref=@@.@@" (@ is an arbitrary number) and the numbers which can be changed will blink.
3. Input the IOP value on the optical pick-up label.  
To select the number: Press the **◀◀ "R"** or **▶▶ "R"** button.  
To select the digit: Press the **REC MODE** button.
4. When the **ENTER/YES "R"** button is pressed, the display becomes "Measu=@@.@@" (@ is an arbitrary number).
5. As the adjustment results are recorded for the step 4 value. Leave it as it is and press the **ENTER/YES "R"** button.
6. "Complete!" will be displayed momentarily. The value will be recorded in the non-volatile memory and the display will become "Iop Write" (C05).

### Display Procedure:

1. Press the **◀◀ "R"** or **▶▶ "R"** button to display "IopRead"(C26).
2. "@@.@/##.#" is displayed and the recorded contents are displayed.  
@@.@ indicates the IOP value on the optical pick-up label.  
##.# indicates the IOP value after adjustment
3. To end, press the **MENU/NO "R"** button to display "Iop Read" (C26).

## 9. TEMPERATURE COMPENSATION OFFSET ADJUSTMENT

Save the temperature data at that time in the non-volatile memory as 25 °C reference data.

### Note:

1. Usually, do not perform this adjustment.
2. Perform this adjustment in an ambient temperature of 22 °C to 28 °C. Perform it immediately after the power is turned on when the internal temperature of the unit is the same as the ambient temperature of 22 °C to 28 °C.
3. When D101 has been replaced, perform this adjustment after the temperature of this part has become the ambient temperature.

### Procedure:

1. Press the **◀◀ "R"** or **▶▶ "R"** button to display "TEMP ADJUST" (C03).
2. Press the **ENTER/YES "R"** button to select the "TEMP ADJUST" mode.
3. "TEMP = [ ] [OK]" and the current temperature data will be displayed.
4. To save the data, press the **ENTER/YES "R"** button.  
When not saving the data, press the **MENU/NO "R"** button.
5. When the **ENTER/YES "R"** button is pressed, "TEMP = [ ] SAVE" will be displayed and turned back to "TEMP ADJUST" (C03) display then. When the **MENU/NO "R"** button is pressed, "TEMP ADJUST" (C03) will be displayed immediately.

### Specified Value:

The "TEMP = [ ]" should be within "E0 - EF", "F0 - FF", "00 - 0F", "10 - 1F" and "20 - 2F".

## 10. LASER POWER ADJUSTMENT

Before starting adjustment;

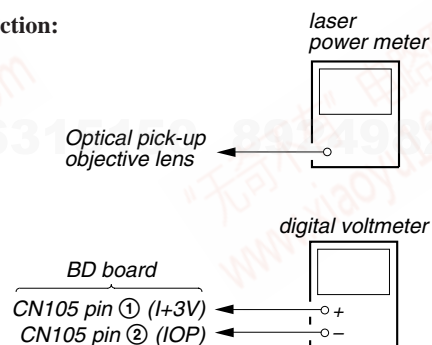
The laser power adjustment value changes depending upon the types of the optical pick-up (KMS-260B or KMS-260E).

Check the type of the optical pick-up before starting adjustment. (See the illustrations "The method of identifying the optical pick-up on page 36.)

Check the IOP value of the optical pick-up before adjustments.

(Refer to 8. Recording and Displaying the Iop Information)

### Connection:



### Procedure:

1. Insert the laser power meter probe into the disk insertion slot and set it on top of the objective lens of the optical pick-up. (When it cannot be set properly, press the **◀◀ "R"** button or **▶▶ "R"** button to move the optical pick-up)  
Connect the digital voltmeter to CN105 pin ① (I+3V) and CN105pin ② (IOP) on the BD board.
2. Press the **◀◀ "R"** or **▶▶ "R"** button to display "LDPWR ADJUST" (C04).  
(Laser power : For adjustment)
3. Press the **ENTER/YES "R"** button once to display "LD 0.9 mW \$ [ ]".
4. Press the **◀◀ "R"** or **▶▶ "R"** button until the laser power meter reading matches with the specified value as described in the following table.

SPECIFIED VALUE	KMS-260B	0.85 to 0.91 mW
	KMS-260E	0.90 to 0.96 mW

- Press the **ENTER/YES "R"** button after setting the range knob of the laser power meter, and save the adjustment results. ("LD SAVE \$ [ ]" will be displayed for a moment)
5. Then "LD 8.4 mW \$ [ ]" will be displayed.

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6. Press the **◀◀ "R"** or **▶▶ "R"** button so that the reading of the laser power meter becomes the specified value, press the **ENTER/YES "R"** button to save it.

SPECIFIED VALUE	KMS-260B	6.7 to 7.1 mW
	KMS-260E	7.2 to 7.3 mW

**Note:** Do not perform the emission with 8.4 mW more than 15 seconds continuously.

7. Then, press the **◀◀ "R"** or **▶▶ "R"** button to display "LDPWR CHECK" (C13).
8. Press the **ENTER/YES "R"** button once to display "LD 0.9mW\$". Check that the reading of the laser power meter matches with the specified value as described in the following table.

SPECIFIED VALUE	KMS-260B	0.85 to 0.91 mW
	KMS-260E	0.90 to 0.96 mW

9. Press the **ENTER/YES "R"** button once more to display "LD 8.4mW\$". Check that the reading of the laser power meter and digital voltmeter satisfy the specified value.  
Note down the digital voltmeter reading value.

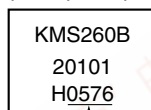
### Specified Value:

Laser power meter reading :

SPECIFIED VALUE	KMS-260B	6.8 to 7.2 mW
	KMS-260E	7.0 to 7.5 mW

Digital voltmeter reading : Value on the optical pick-up label  $\pm 10\%$

(Optical pick-up label)



(For details of the method for checking this value, refer to "8. Recording and Displaying the Iop Information")

IOP=57.6 mA in this case

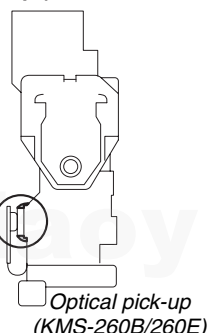
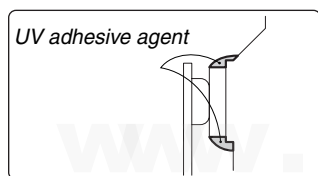
$IOP (mA) = \text{Digital voltmeter reading (mV)} / 1 (\Omega)$

10. Press the **MENU/NO "R"** button to display "LDPWR CHECK" (C13) and stop the laser emission.  
(The **MENU/NO "R"** button is effective at all times to stop the laser emission)
11. Press the **◀◀ "R"** or **▶▶ "R"** button to display "Iop Write" (C05).
12. Press the **ENTER/YES "R"** button. When the display becomes Ref=@@@.@ (@ is an arbitrary number), press the **ENTER/YES "R"** button to display "Measu=@@@.@" (@ is an arbitrary number).
13. The numbers which can be changed will blink. Input the Iop value noted down at step 9.  
To select the number : Press the **◀◀ "R"** or **▶▶ "R"** button.  
To select the digit : Press the **REC MODE** button.
14. When the **ENTER/YES "R"** button is pressed, "Complete!" will be displayed momentarily. The value will be recorded in the non-volatile memory and the display will become "Iop Write" (C05).

**Note:** After step 4, each time the **ENTER/YES "R"** button is pressed, the display will be switched to "LD 0.7mW\$", "LD 7.5mW\$", and "LD WP ホセ イ". Nothing needs to be performed here.

### The method of identifying the optical pick-up (KMS-260B/260E)

UV adhesive agent = (Pink : KMS-260B  
White : KMS-260E)



## 11. IOP NV SAVE

Write the reference values in the nonvolatile memory to perform "Iop compare". As this involves rewriting the reference values, do not perform this procedure except when adjusting the laser power during replacement of the optical pick-up and when replacing the IC102. Otherwise the optical pick-up check may deteriorate.

**Note:** Perform this function with the optical pick-up set at room temperature.

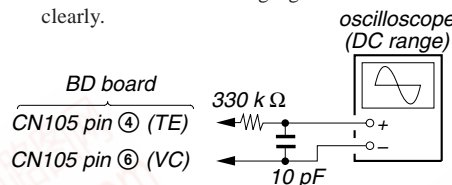
### Procedure:

- Press the **◀◀ "R"** or **▶▶ "R"** button to display "Iop NV Save" (C06).
- Press the **ENTER/YES "R"** button and display "Iop [stop]".
- After the display changes to "Iop =xxsave?", press the **ENTER/YES "R"** button.
- After "Complete!" is displayed momentarily, the display changes to "Iop 8.4 mW".
- After the display changes to "Iop=yysave?", press the **ENTER/YES "R"** button.
- When "Complete!" is displayed, it means that Iop NV saving has been completed.

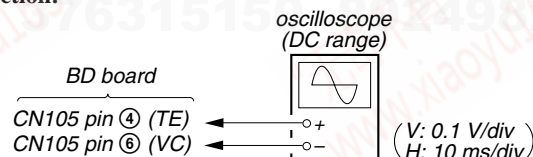
## 12. TRAVERSE ADJUSTMENT

**Note 1:** Data will be erased during MO reading if a recorded disc is used in this adjustment.

**Note 2:** If the traverse waveform is not clear, connect the oscilloscope as shown in the following figure so that it can be seen more clearly.



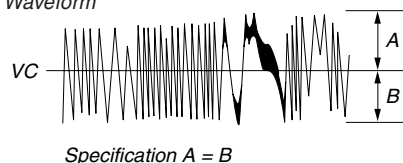
### Connection:



### Procedure:

- Connect an oscilloscope to CN105 pin ④ (TE) and CN105 pin ⑥ (VC) on the BD board.
- Load a disc (any available on the market). (Refer to Note 1)
- Press the **▶▶ "R"** button to move the optical pick-up outside the pit.
- Press the **◀◀ "R"** or **▶▶ "R"** button to display "EF MO ADJUST" (C07).
- Press the **ENTER/YES "R"** button to display "EFB = MO-R". (Laser power READ power/Focus servo ON/tracking servo OFF/spindle (S) servo ON)
- Press the **◀◀ "R"** or **▶▶ "R"** button so that the waveform of the oscilloscope becomes the specified value.  
(When the **◀◀ "R"** or **▶▶ "R"** button is pressed, the "EFB=" changes and the waveform changes) In this adjustment, waveform varies at intervals of approx. 2%. Adjust the waveform so that the specified value is satisfied as much as possible.  
(Read power traverse adjustment)

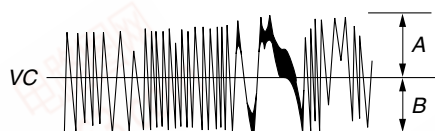
### Traverse Waveform



- Press the **ENTER/YES "R"** button and save the result of adjustment to the non-volatile memory ("EFB = MO-SAVE" will be displayed for a moment. Then "EFB = MO-W" will be displayed).

8. Press the **◀◀ "R"** or **▶▶ "R"** button so that the waveform of the oscilloscope becomes the specified value.  
(When the **◀◀ "R"** or **▶▶ "R"** button is pressed, the **EFB =** **000** changes and the waveform changes) In this adjustment, waveform varies at intervals of approx. 2%. Adjust the waveform so that the specified value is satisfied as much as possible.  
(Write power traverse adjustment)

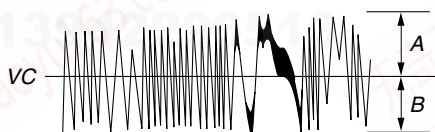
Traverse Waveform



Specification A = B

9. Press the **ENTER/YES "R"** button, and save the adjustment results in the non-volatile memory. ("EFB = **000** SAVE" will be displayed for a moment)
10. "EFB = **000** MO-P" will be displayed.  
The optical pick-up moves to the pit area automatically and servo is imposed.
11. Press the **◀◀ "R"** or **▶▶ "R"** button until the waveform of the oscilloscope moves closer to the specified value.  
In this adjustment, waveform varies at intervals of approx. 2%. Adjust the waveform so that the specified value is satisfied as much as possible.

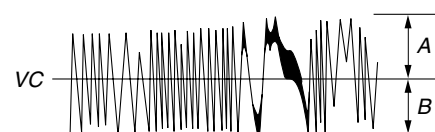
Traverse Waveform



Specification A = B

12. Press the **ENTER/YES "R"** button, and save the adjustment results in the non-volatile memory. ("EFB = **000** SAVE" will be displayed for a moment)  
Next "EF MO ADJUST" (C07) is displayed. The disc stops rotating automatically.
13. Press the **▲ (MD)** button and take out the disc.
14. Load the check disc (TDYS-1).
15. Press the **◀◀ "R"** or **▶▶ "R"** button to display "EF CD ADJUST" (C08).
16. Press the **ENTER/YES "R"** button to display "EFB = **000** CD".  
Servo is imposed automatically.
17. Press the **◀◀ "R"** or **▶▶ "R"** button so that the waveform of the oscilloscope moves closer to the specified value.  
In this adjustment, waveform varies at intervals of approx. 2%. Adjust the waveform so that the specified value is satisfied as much as possible.

Traverse Waveform



Specification A = B

18. Press the **ENTER/YES "R"** button, display "EFB = **000** SAVE" for a moment and save the adjustment results in the non-volatile memory.  
Next "EF CD ADJUST" (C08) will be displayed.
19. Press the **▲ (MD)** button and take out the check disc.

**Adjustment Location:** BD board (see page 39)

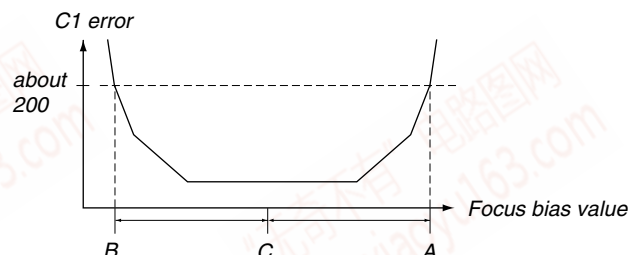
### 13.FOCUS BIAS ADJUSTMENT

#### Procedure:

1. Load the continuously-recorded disc. (Refer to "5. USING THE CONTINUOUSLY RECORDED DISC" (See page 32))
2. Press the **◀◀ "R"** or **▶▶ "R"** button to display "CPLAY1 MODE" (C34).
3. Press the **ENTER/YES "R"** button to display "CPLAY 1MID".
4. Press the **MENU/NO "R"** button when "C = **0000** AD = **00**" is displayed.
5. Press the **◀◀ "R"** or **▶▶ "R"** button to display "FBIAS ADJUST" (C09).
6. Press the **ENTER/YES "R"** button to display "**0000/00** a = **00**".  
The first four digits indicate the C1 error rate, the two digits after "/" indicate ADER, and the 2 digits after "a =" indicate the focus bias value.
7. Press the **▶▶ "R"** button and find the focus bias value at which the C1 error rate becomes about 200 (refer to Note 2).
8. Press the **ENTER/YES "R"** button to display "**0000/00** b = **00**".
9. Press the **◀◀ "R"** button and find the focus bias value at which the C1 error rate becomes about 200.
10. Press the **ENTER/YES "R"** button to display "**0000/00** c = **00**".
11. Check that the C1 error rate is below 20 and ADER is 00. Then press the **ENTER/YES "R"** button.
12. If the "**00**" in "**00 - 00 - 00 (00)**" is above 20, press the **ENTER/YES "R"** button.  
If below 20, press the **MENU/NO "R"** button and repeat the adjustment from step 2.
13. Press the **▲ (MD)** button and take out the disc.

**Note 1:** The relation between the C1 error and focus bias is as shown in the following figure. Find points A and B in the following figure using the above adjustment. The focal point position C is automatically calculated from points A and B.

**Note 2:** As the C1 error rate changes, perform the adjustment using the average value.





## 14. ERROR RATE CHECK

### 14-1. CD Error Rate Check

#### Procedure:

1. Load the check disc (TDYS-1).
2. Press the **◀◀ "R"** or **▶▶ "R"** button and display "CPLAY1 MODE" (C34).
3. Press the **ENTER/YES "R"** button twice and display "CPLAY1 MID".
4. The display changes to "C = 0000 AD = 00".
5. Check that the C1 error rate is below 20.
6. Press the **MENU/NO "R"** button to stop playback, then press the **▲ (MD)** button and take out the check disc.

### 14-2. MO Error Rate Check

#### Procedure:

1. Load the continuously-recorded disc. (Refer to "5. USING THE CONTINUOUSLY RECORDED DISC" (See page 32))
2. Press the **◀◀ "R"** or **▶▶ "R"** button to display "CPLAY1 MODE" (C34).
3. Press the **ENTER/YES "R"** button to display "CPLAY1 MID".
4. The display changes to "C1 = 0000 AD = 00".
5. If the C1 error rate is below 50, check that ADER is 00.
6. Press the **MENU/NO "R"** button to stop playback, then press the **▲ (MD)** button and take out the disc.

## 15. FOCUS BIAS CHECK

Change the focus bias and check the focus tolerance amount.

#### Procedure:

1. Load the continuously-recorded disc. (Refer to "5. USING THE CONTINUOUSLY RECORDED DISC" (See page 32))
2. Press the **◀◀ "R"** or **▶▶ "R"** button to display "CPLAY1 MODE" (C34).
3. Press the **ENTER/YES "R"** button twice to display "CPLAY1 MID".
4. Press the **MENU/NO "R"** button when "C1 = 0000 AD = 00" is displayed.
5. Press the **◀◀ "R"** or **▶▶ "R"** button to display "FBIAS CHECK" (C16).
6. Press the **ENTER/YES "R"** button to display "0000/00 c = 00". The first four digits indicate the C1 error rate, the two digits after "/" indicate ADER, and the 2 digits after "c =" indicate the focus bias value.  
Check that the C1 error is below 20 and ADER is below 2.
7. Press the **ENTER/YES "R"** button and display "0000/00 b = 00".  
Check that the C1 error is below 100 and ADER is below 2.
8. Press the **ENTER/YES "R"** button and display "0000/00 a = 00".  
Check that the C1 error is below 100 and ADER is below 2.
9. Press the **MENU/NO "R"** button, then press the **▲ (MD)** button and take out the disc.

**Note:** If the C1 error and ADER are above other than the specified value at points a (step 8. in the above) or b (step 7. in the above), the focus bias adjustment may not have been carried out properly. Adjust perform the beginning again.

## 16. AUTO GAIN CONTROL OUTPUT LEVEL ADJUSTMENT

Be sure to perform this adjustment when the optical pick-up is replaced.

If the adjustment results becomes "Adjust NG!", the optical pick-up may be faulty or the servo system circuits may be abnormal.

### 16-1. CD Auto Gain Control Output Level Adjustment

#### Procedure:

1. Load the check disc (TDYS-1).
2. Press the **◀◀◀ "R"** or **▶▶▶▶ "R"** button to display "AG Set (CD)" (C11).
3. When the **ENTER/YES "R"** button is pressed, the adjustment will be performed automatically.  
"Complete!" will then be displayed momentarily when the value is recorded in the non-volatile memory, after which the display changes to "AG Set (CD)" (C11).
4. Press the **▲ (MD)** button and take out the check disc.

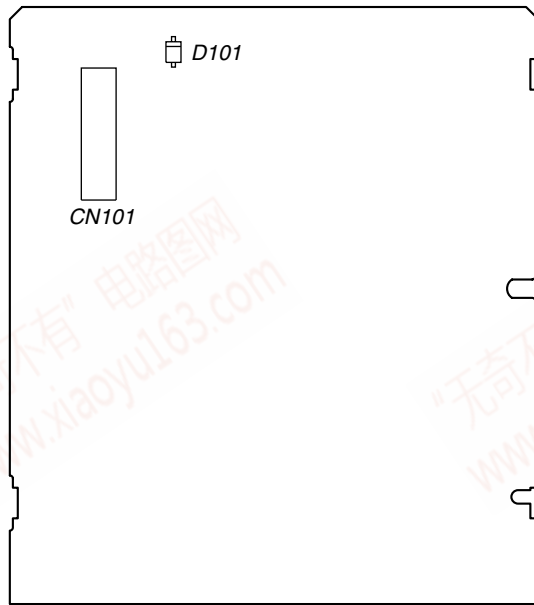
### 16-2. MO Auto Gain Control Output Level Adjustment

#### Procedure:

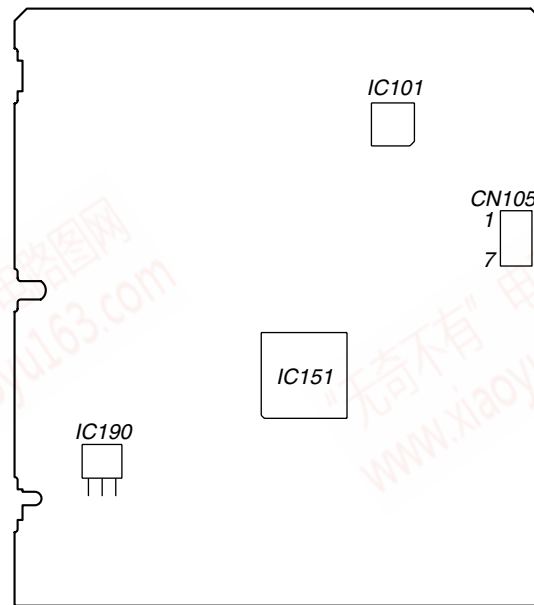
1. Load the test disc (MDW-74/GA-1).
2. Press the **◀◀ "R"** or **▶▶ "R"** button to display "AG Set (MO)" (C10).
3. When the **ENTER/YES "R"** button is pressed, the adjustment will be performed automatically.  
"Complete!" will then be displayed momentarily when the value is recorded in the non-volatile memory, after which the display changes to "AG Set (MO)" (C10).
4. Press the **▲ (MD)** button and take out the test disc.

Adjustment and checking Location:

– BD BOARD (Component Side) –



– BD BOARD (Conductor Side) –



- 1. I+3V
- 2. IOP
- 3. GND
- 4. TE
- 5. FE
- 6. VC
- 7. RF

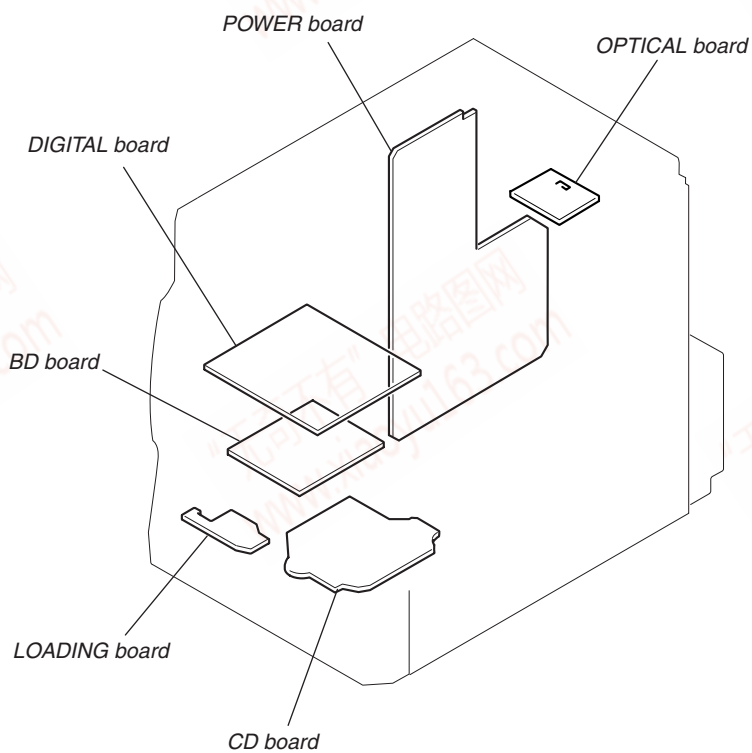
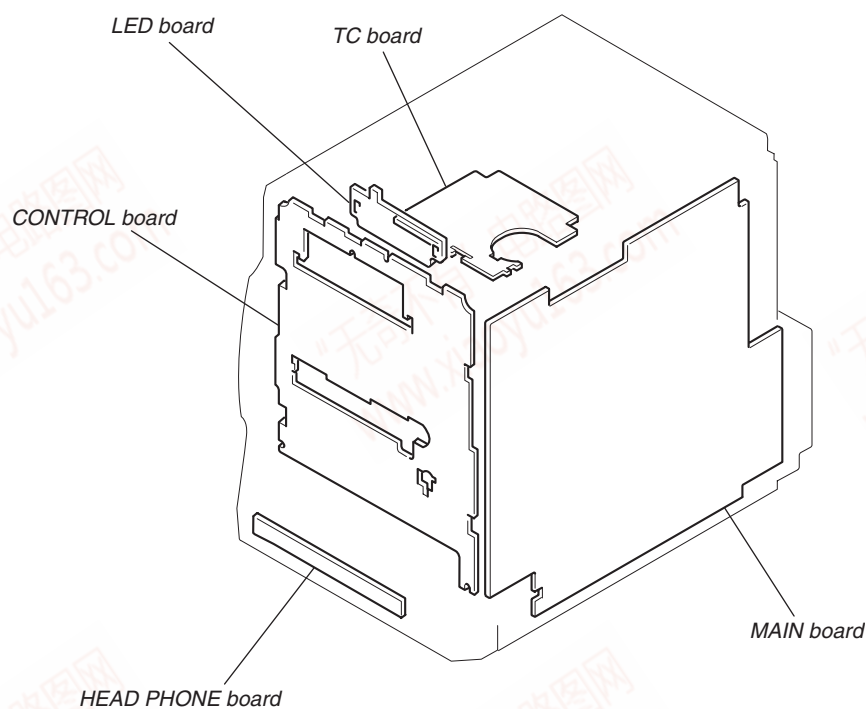
**Note:** It is useful to use the jig for checking the waveform. (Refer to Servicing Notes on page 8)



## HCD-J300

### SECTION 7 DIAGRAMS




#### 7-1. CIRCUIT BOARDS LOCATION



**THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.**  
(In addition to this, the necessary note is printed in each block.)

**For schematic diagrams.**

**Note:**

- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF}$ :  $\mu\text{F}$  50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and  $\frac{1}{4}\text{W}$  or less unless otherwise specified.
- $\Delta$  : internal component.
-  : nonflammable resistor.
-  : fusible resistor.
-  : panel designation.


**Note:**

The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety. Replace only with part number specified.

**Note:**

Les composants identifiés par une marque  $\Delta$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

-  : B+ Line.
-  : B- Line.

-  : adjustment for repair.

- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- Voltages are taken with a VOM (Input impedance 10 M $\Omega$ ). Voltage variations may be noted due to normal production tolerances.

- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.

- Circled numbers refer to waveforms.

- Signal path.




-  : FM
-  : VIDEO/MD (AUDIO)
-  : PB (TAPE)
-  : REC (TAPE)
-  : CD (Analog)
-  : CD (DIGITAL OUT)
-  : MD (PB)
-  : MD (REC)

- Abbreviation

- HK : Hong Kong model
- SP : Singapore model
- TW : Taiwan model

**For printed wiring boards.**

**Note:**

-  : parts extracted from the component side.
-  : parts extracted from the conductor side.
-  : Through hole.

-  : Pattern from the side which enables seeing.

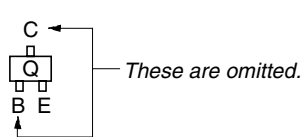
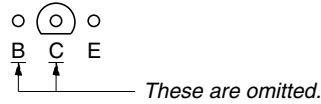
(The other layers' patterns are not indicated.)

**Caution:**

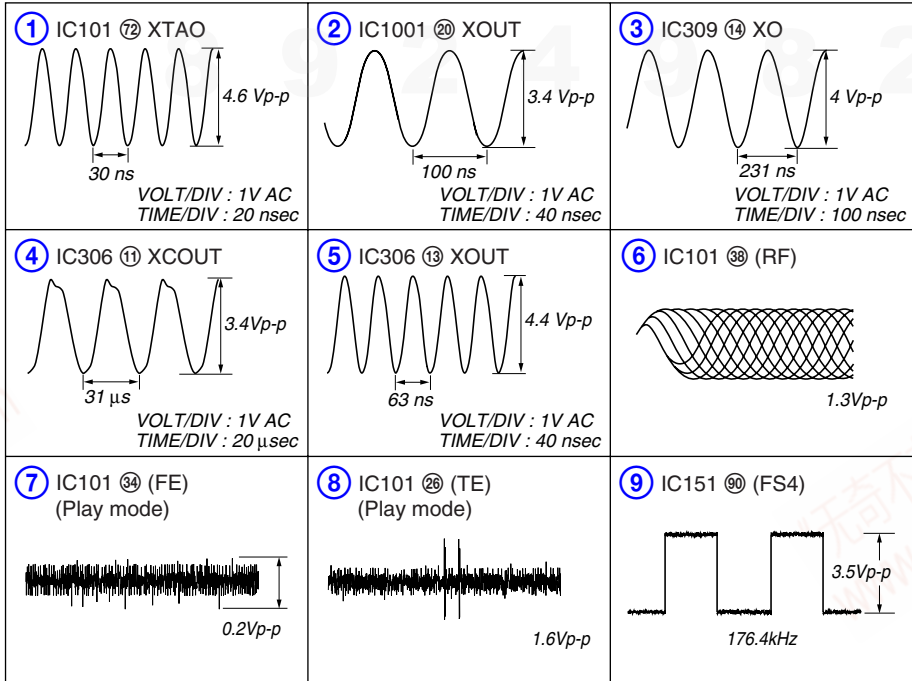
Pattern face side: Parts on the pattern face side seen from the (Side B) pattern face are indicated.

Parts face side: Parts on the parts face side seen from the (Side A) parts face are indicated.

**• Indication of transistor**

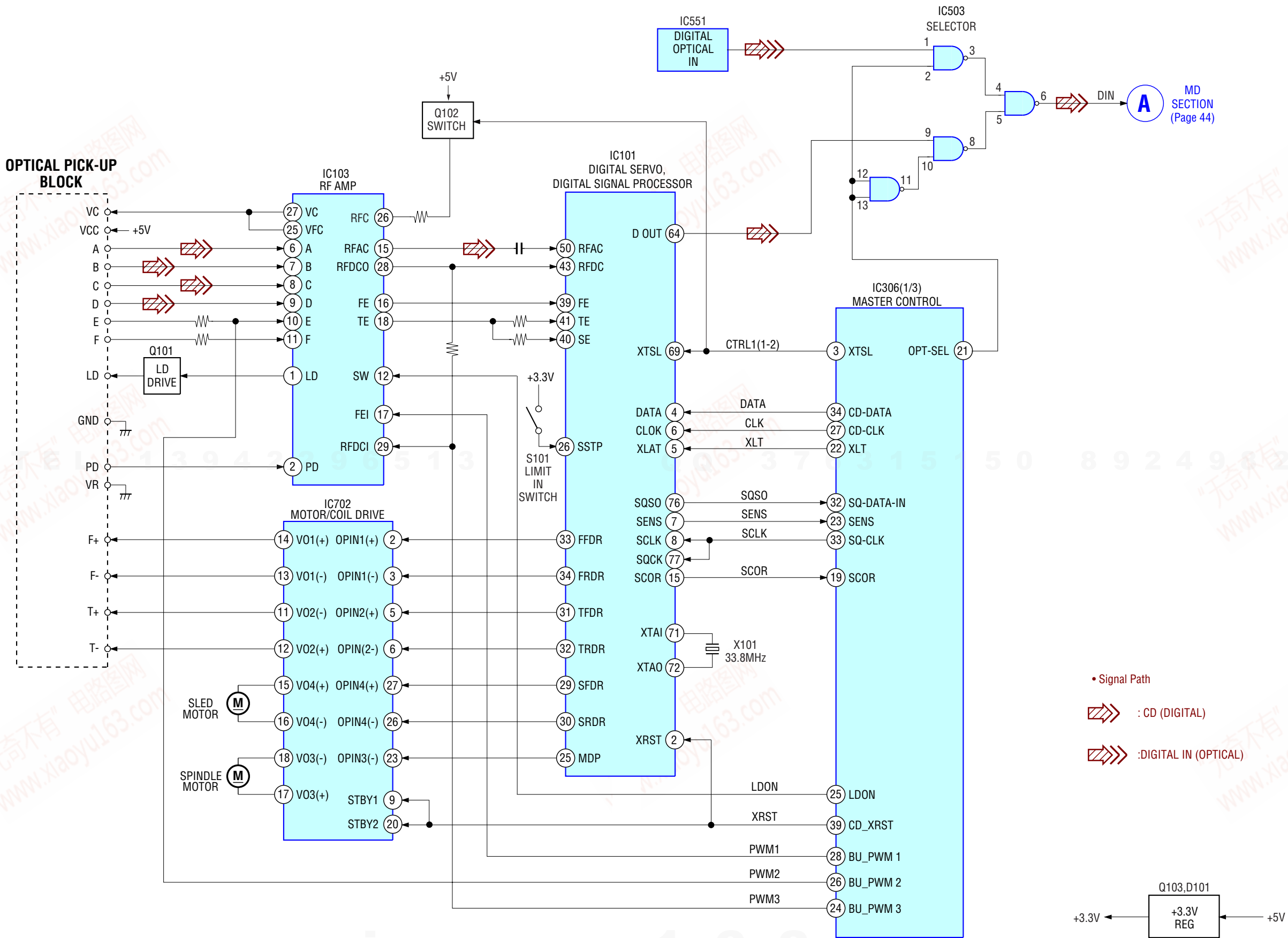


**• Waveforms**

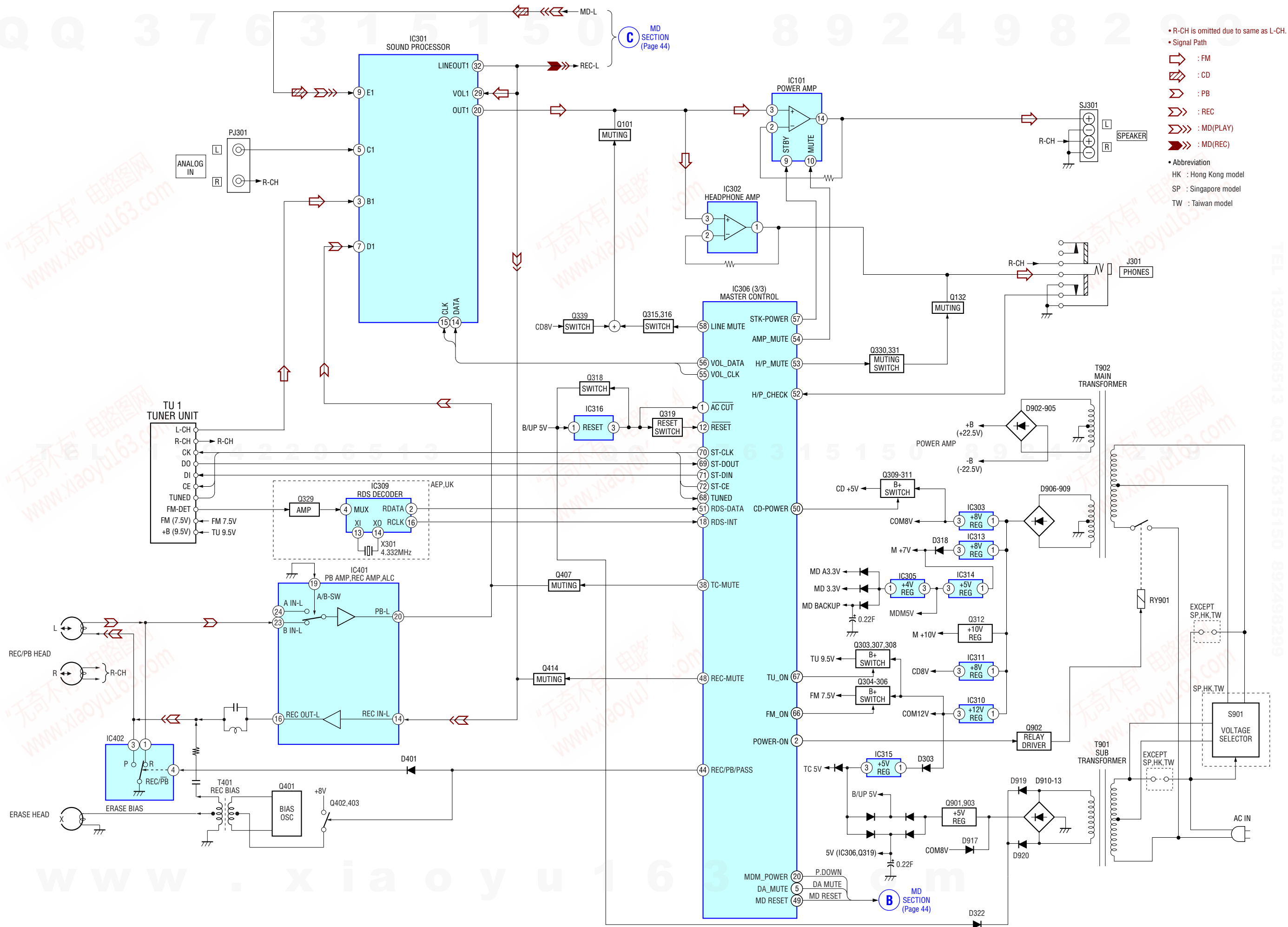


TEL 13942296513 QQ 376315150 892498299

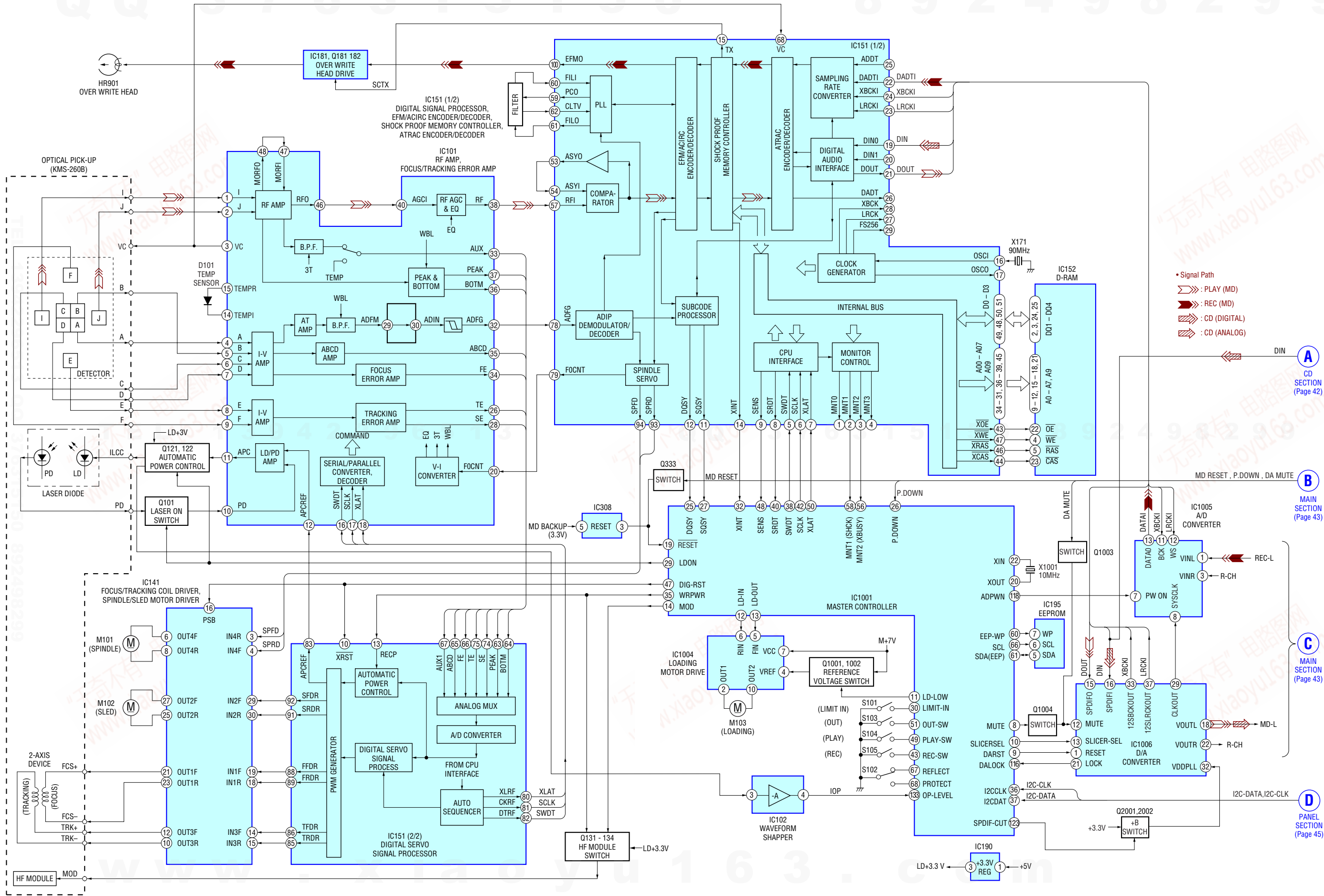
TEL 13942296513 QQ 376315150 892498299



**BLOCK DIAGRAM – MAIN SECTION –**

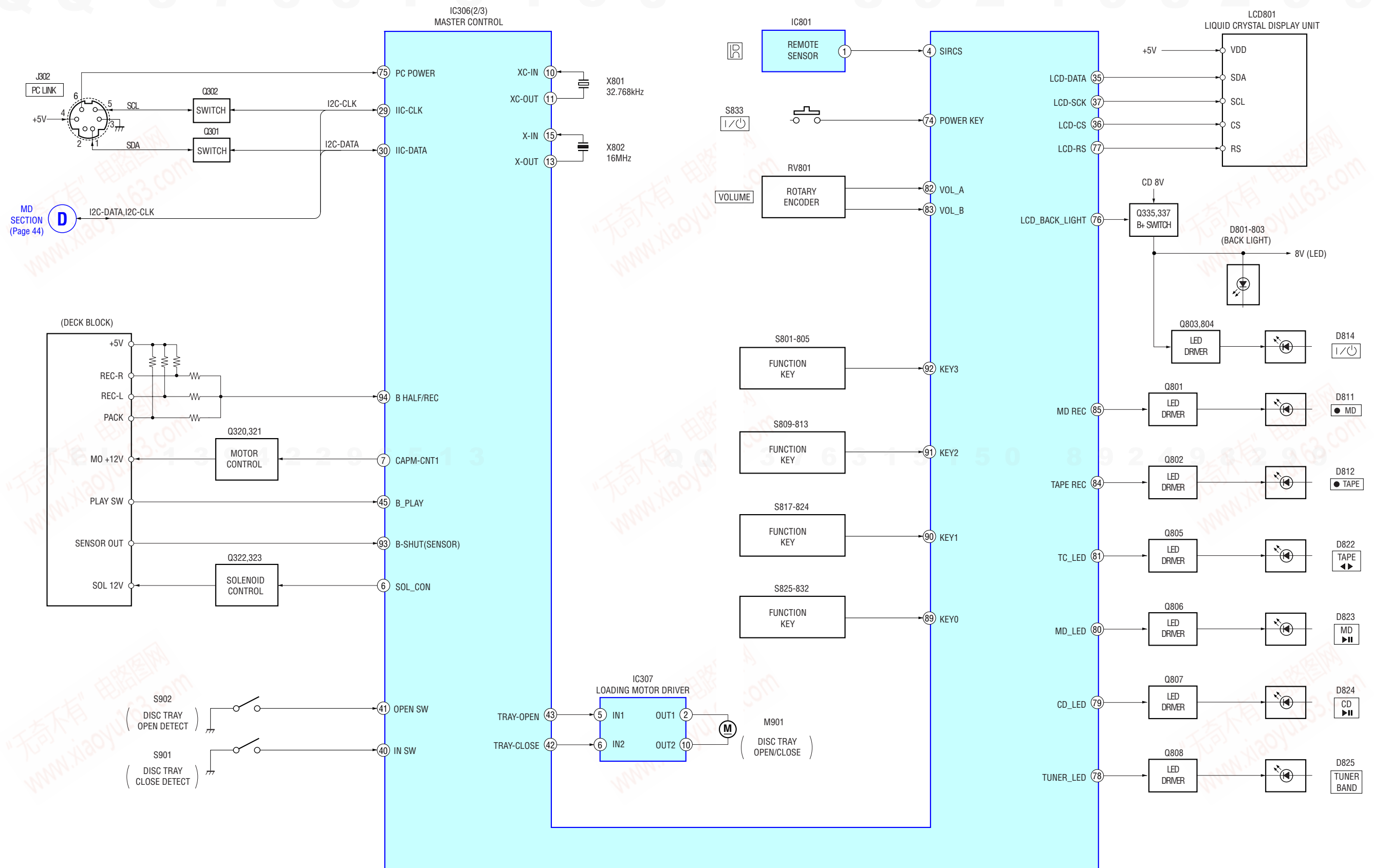






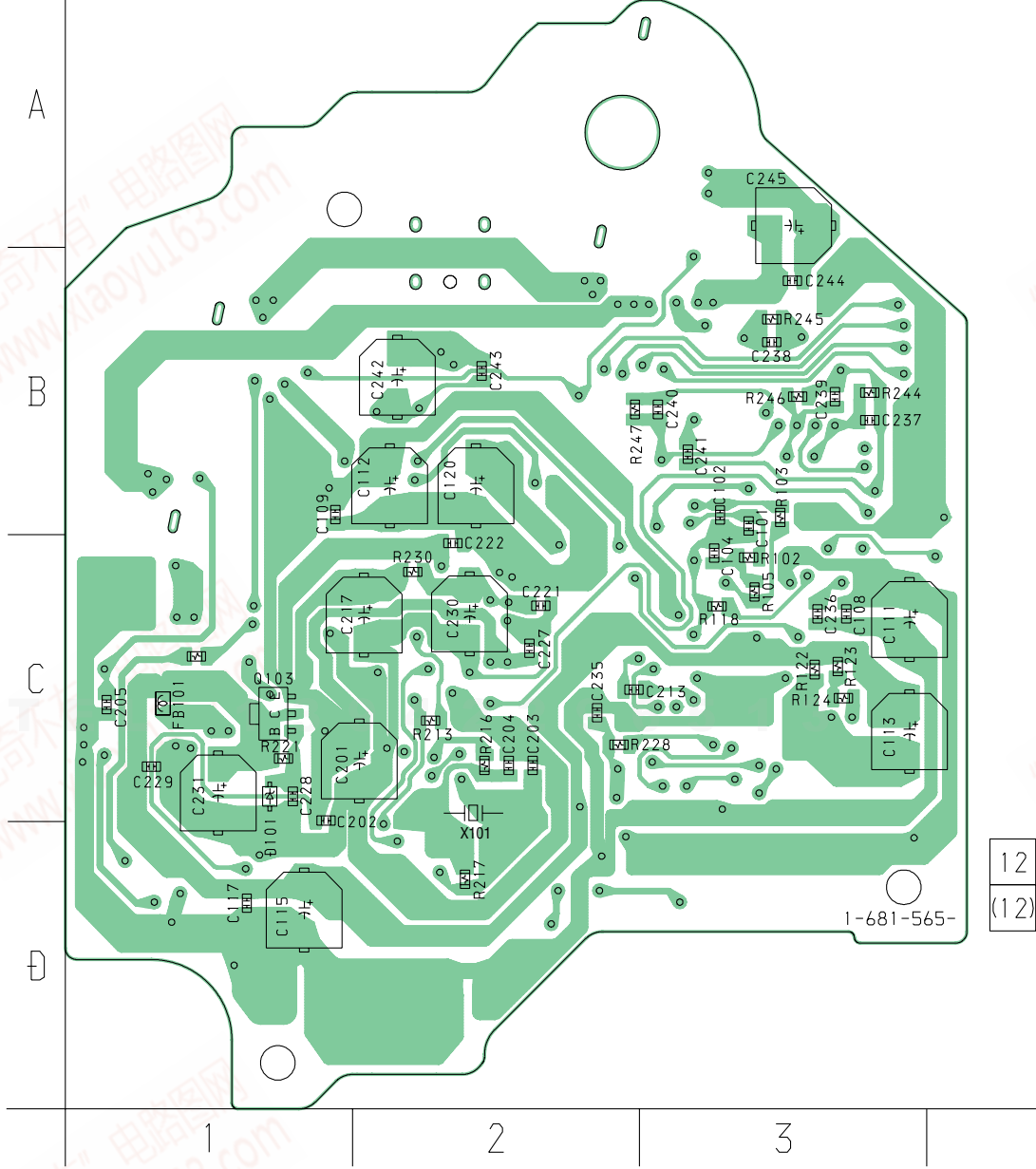


BLOCK DIAGRAM – PANEL SECTION –

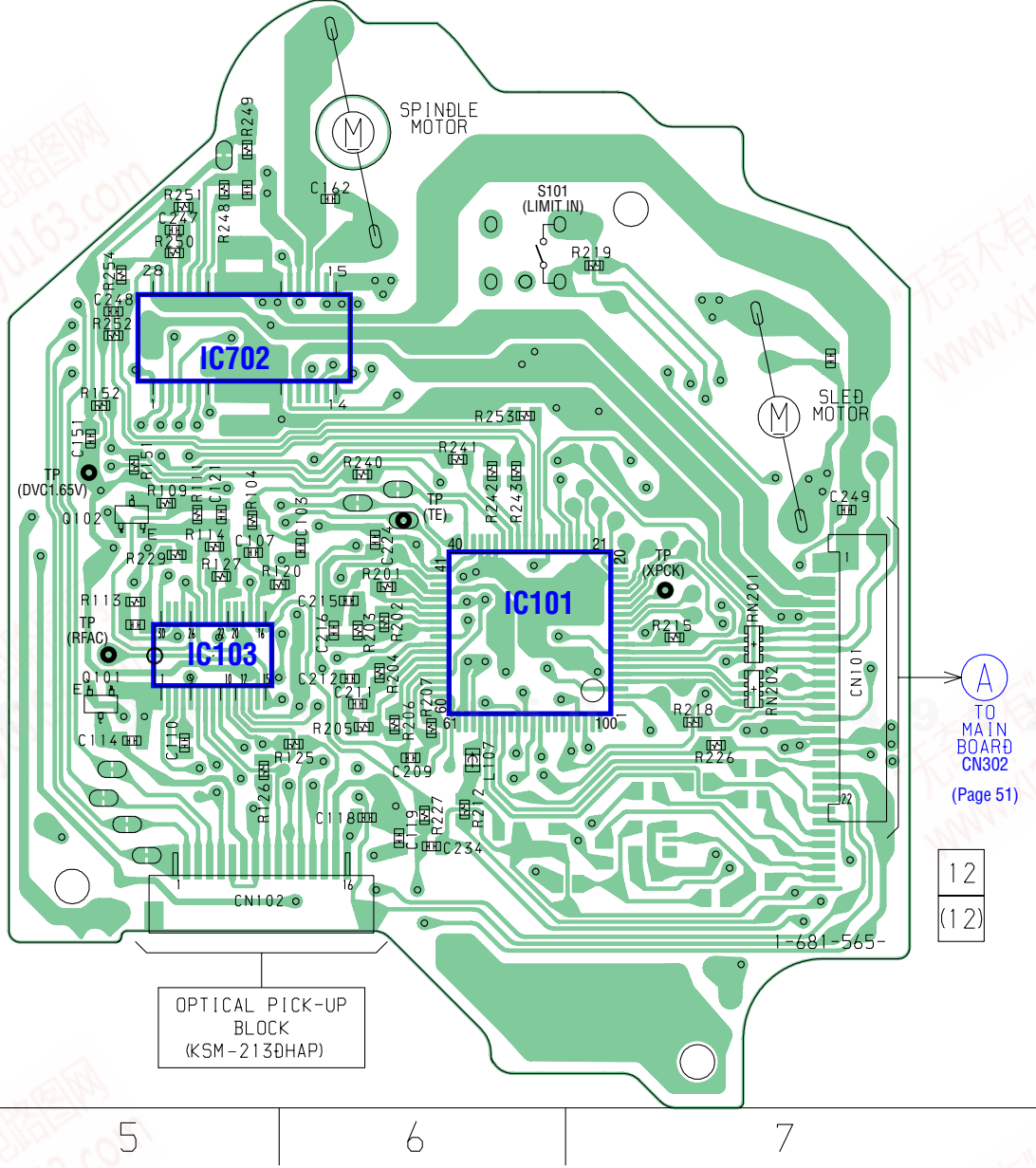


7-3. PRINTED WIRING BOARD – CD BOARD – • See page 40 for Circuit Boards Location.

【CD BOARD】(SIDE A)



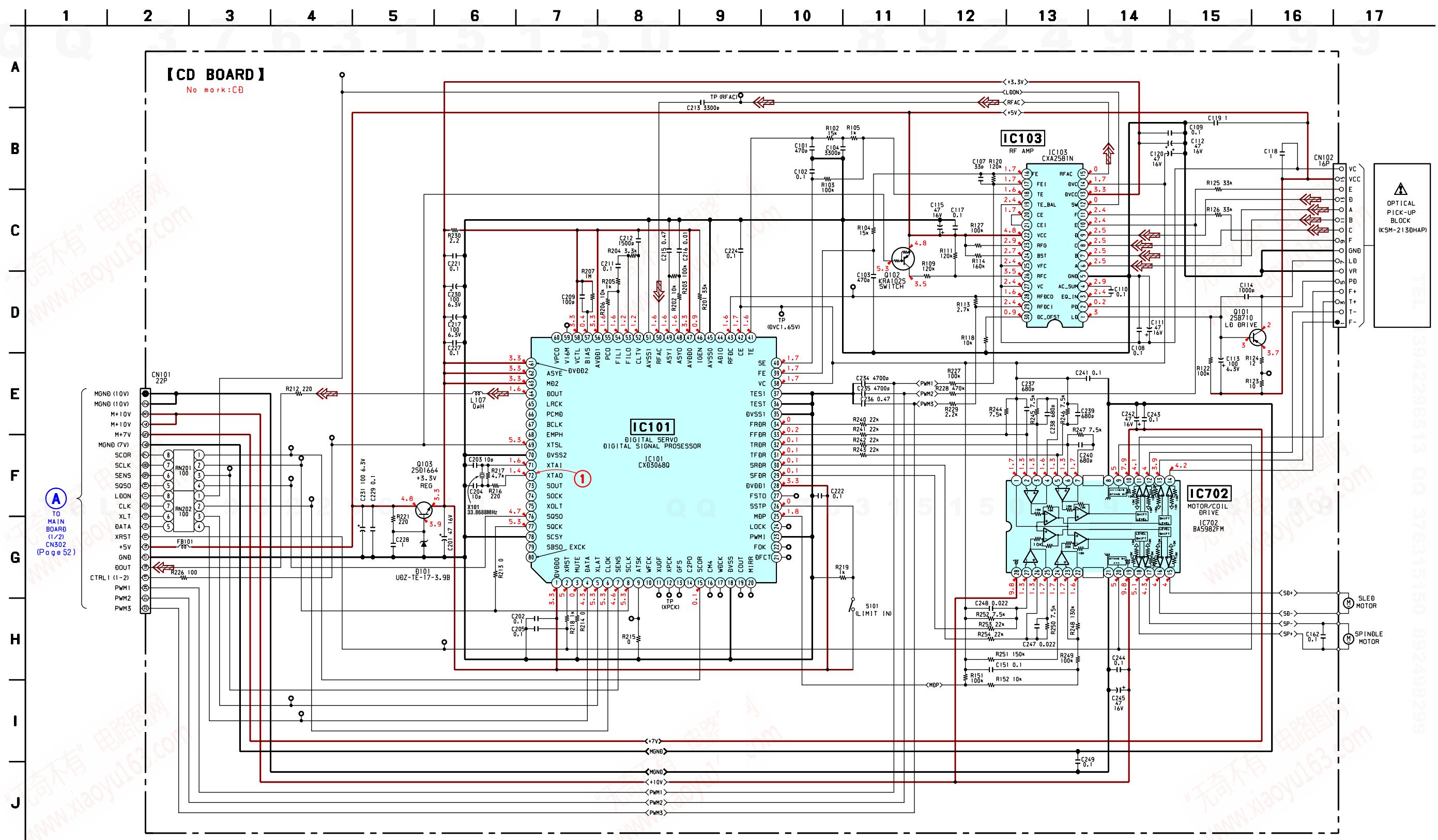
【CD BOARD】(SIDE B)



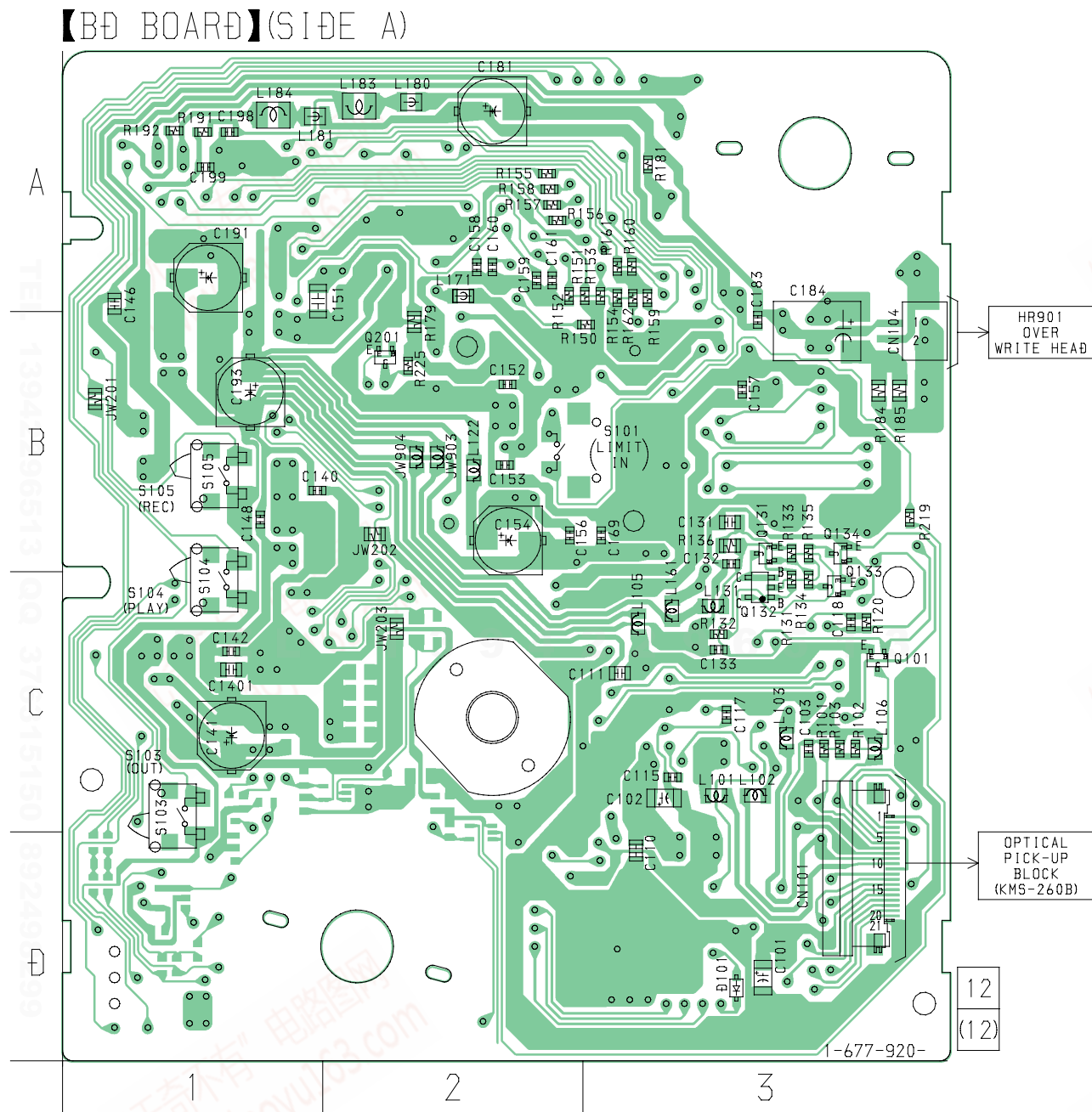
• Semiconductor Location

Ref. No.	Location
D101	D-1
IC101	C-6
IC103	C-5
IC702	B-5
Q101	C-5
Q102	B-5
Q103	C-1

7-4. SCHEMATIC DIAGRAM – CD BOARD – • See page 41 for Waveforms.

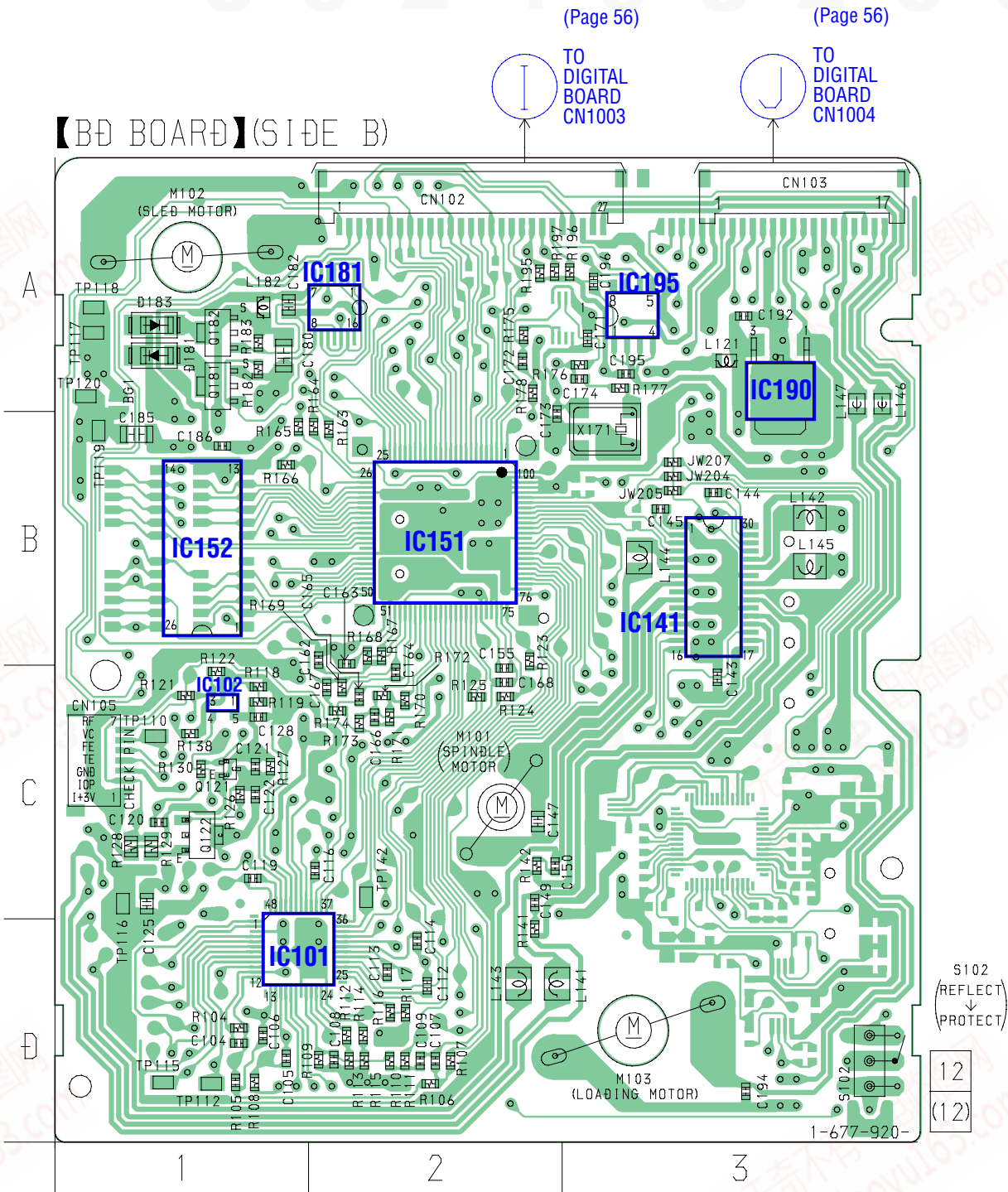






• Semiconductor Location  
SIDE A

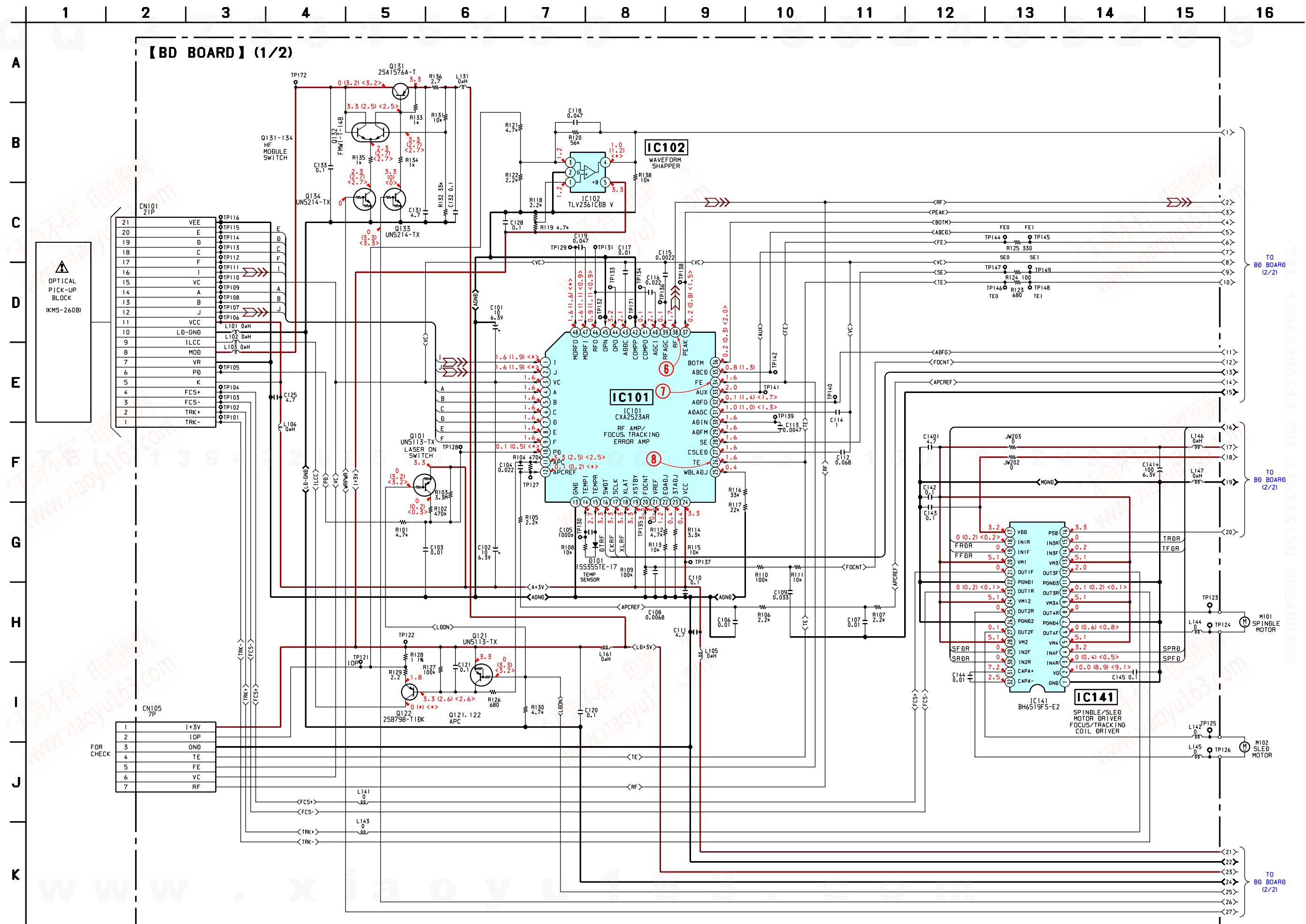
Ref. No.	Location
D101	D-3
Q101	C-3
Q131	B-3
Q132	C-3
Q133	B-3
Q134	B-3



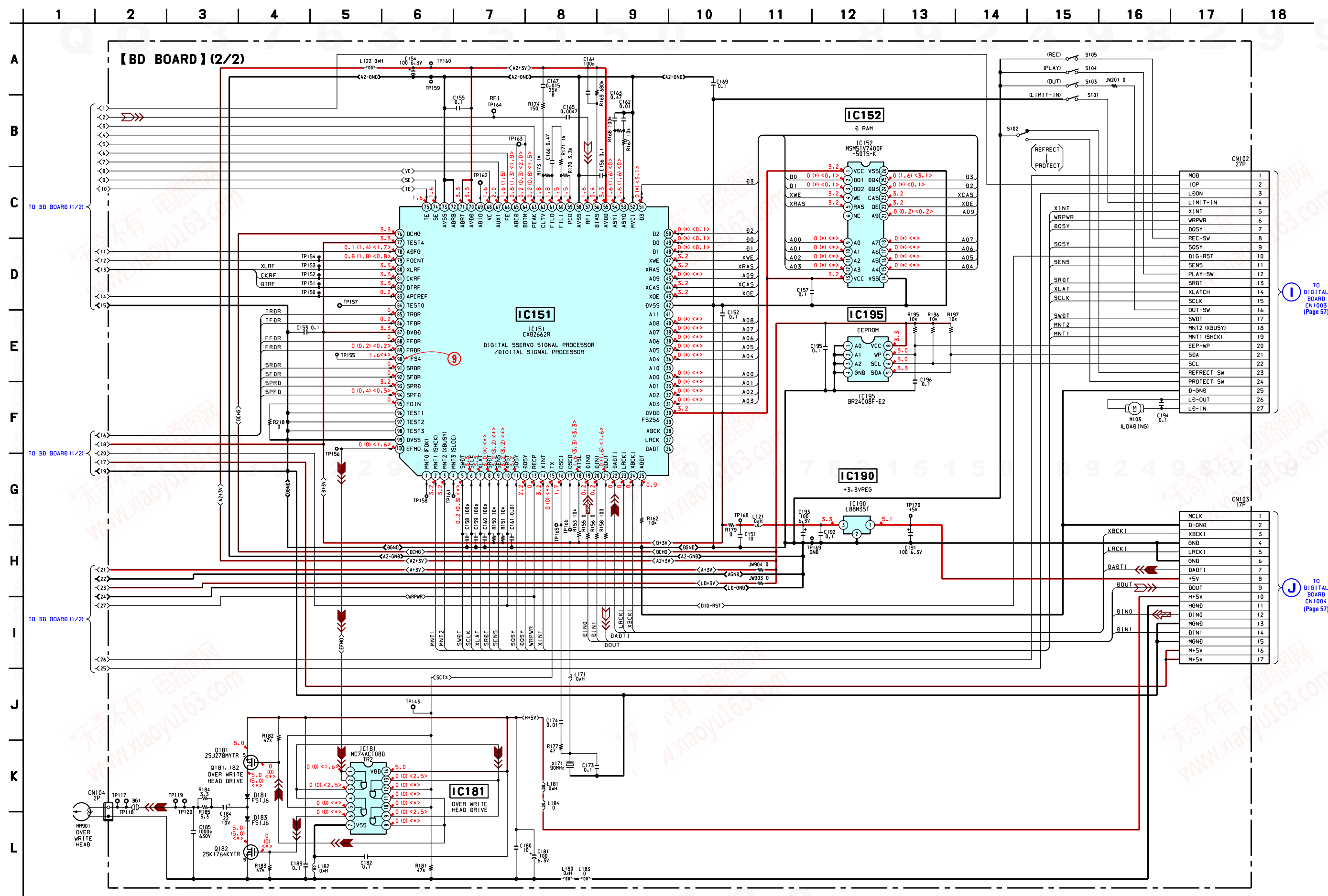
• Semiconductor Location  
SIDE B

Ref. No.	Location	Ref. No.	Location
D181	A-1	IC181	A-2
D183	A-1	IC190	A-3
		IC195	A-3
IC101	D-1	Q121	C-1
IC102	C-1	Q122	C-1
IC141	B-3	Q181	A-1
IC151	B-2	Q182	A-1
IC152	B-1		

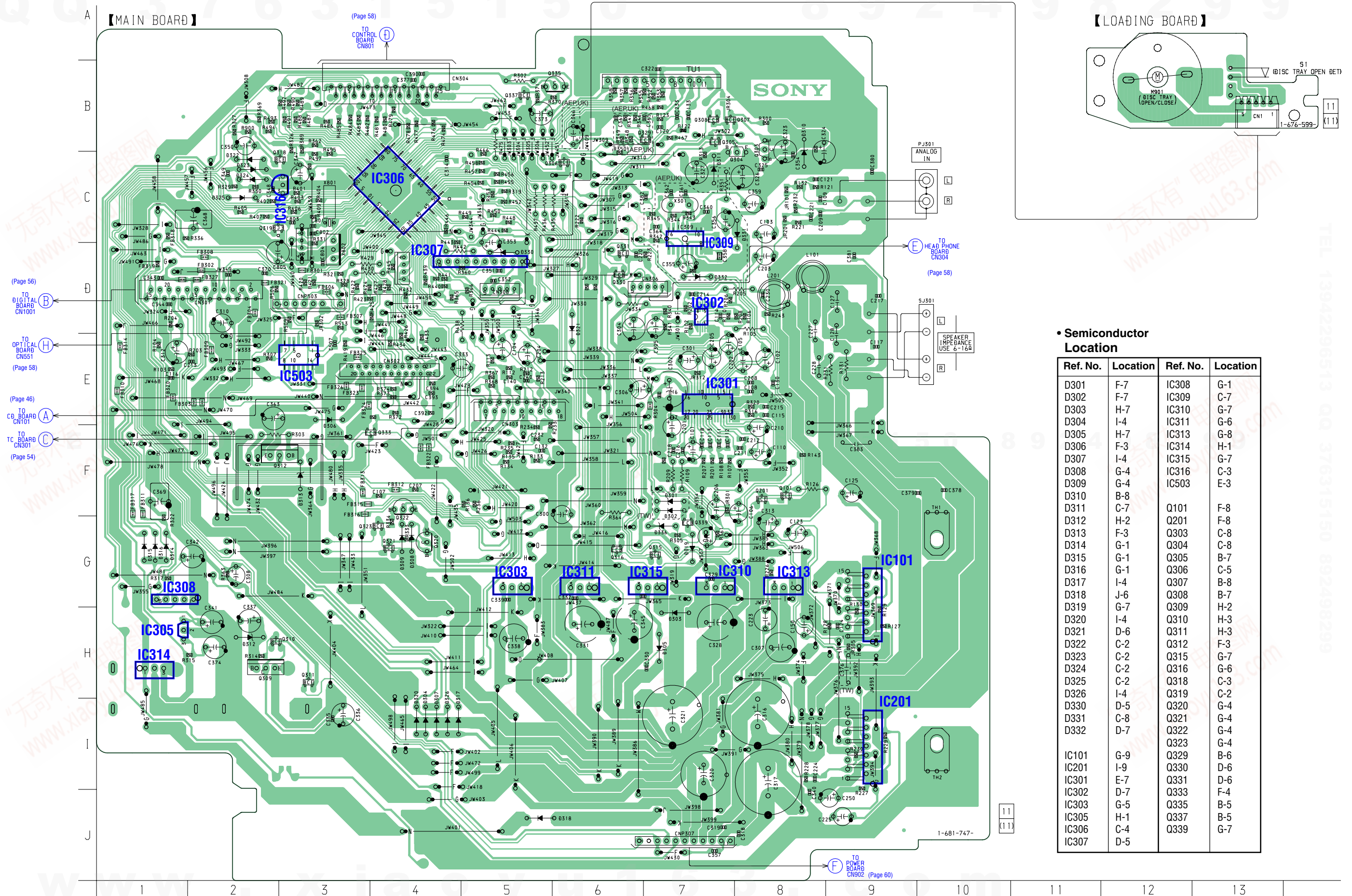
**7-6. SCHEMATIC DIAGRAM – BD BOARD (1/2) –** • See page 41 for Waveforms. • See page 63 for IC Pin Function Description.







**7-8. PRINTED WIRING BOARDS – AUDIO SECTION –** • See page 40 for Circuit Boards Location.

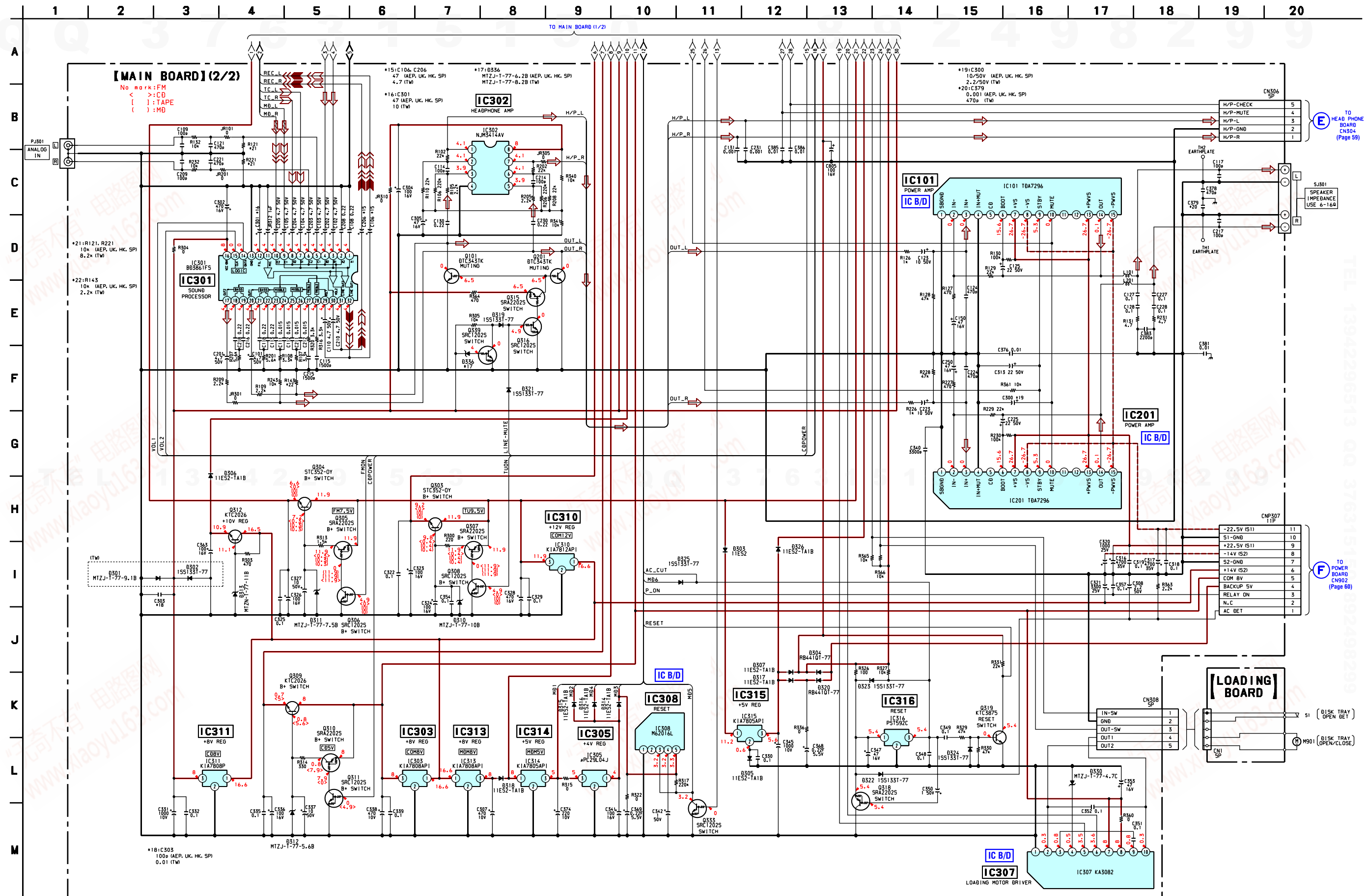


Ref. No.	Location	Ref. No.	Location
D301	F-7	IC308	G-1
D302	F-7	IC309	C-7
D303	H-7	IC310	G-7
D304	I-4	IC311	G-6
D305	H-7	IC313	G-8
D306	F-3	IC314	H-1
D307	I-4	IC315	G-7
D308	G-4	IC316	C-3
D309	G-4	IC503	E-3
D310	B-8		
D311	C-7	Q101	F-8
D312	H-2	Q201	F-8
D313	F-3	Q303	C-8
D314	G-1	Q304	C-8
D315	G-1	Q305	B-7
D316	G-1	Q306	C-5
D317	I-4	Q307	B-8
D318	J-6	Q308	B-7
D319	G-7	Q309	H-2
D320	I-4	Q310	H-3
D321	D-6	Q311	H-3
D322	C-2	Q312	F-3
D323	C-2	Q315	G-7
D324	C-2	Q316	G-6
D325	C-2	Q318	C-3
D326	I-4	Q319	C-2
D330	D-5	Q320	G-4
D331	C-8	Q321	G-4
D332	D-7	Q322	G-4
		Q323	G-4
IC101	G-9	Q329	B-6
IC201	I-9	Q330	D-6
IC301	E-7	Q331	D-6
IC302	D-7	Q333	F-4
IC303	G-5	Q335	B-5
IC305	H-1	Q337	B-5
IC306	C-4	Q339	G-7
IC307	D-5		



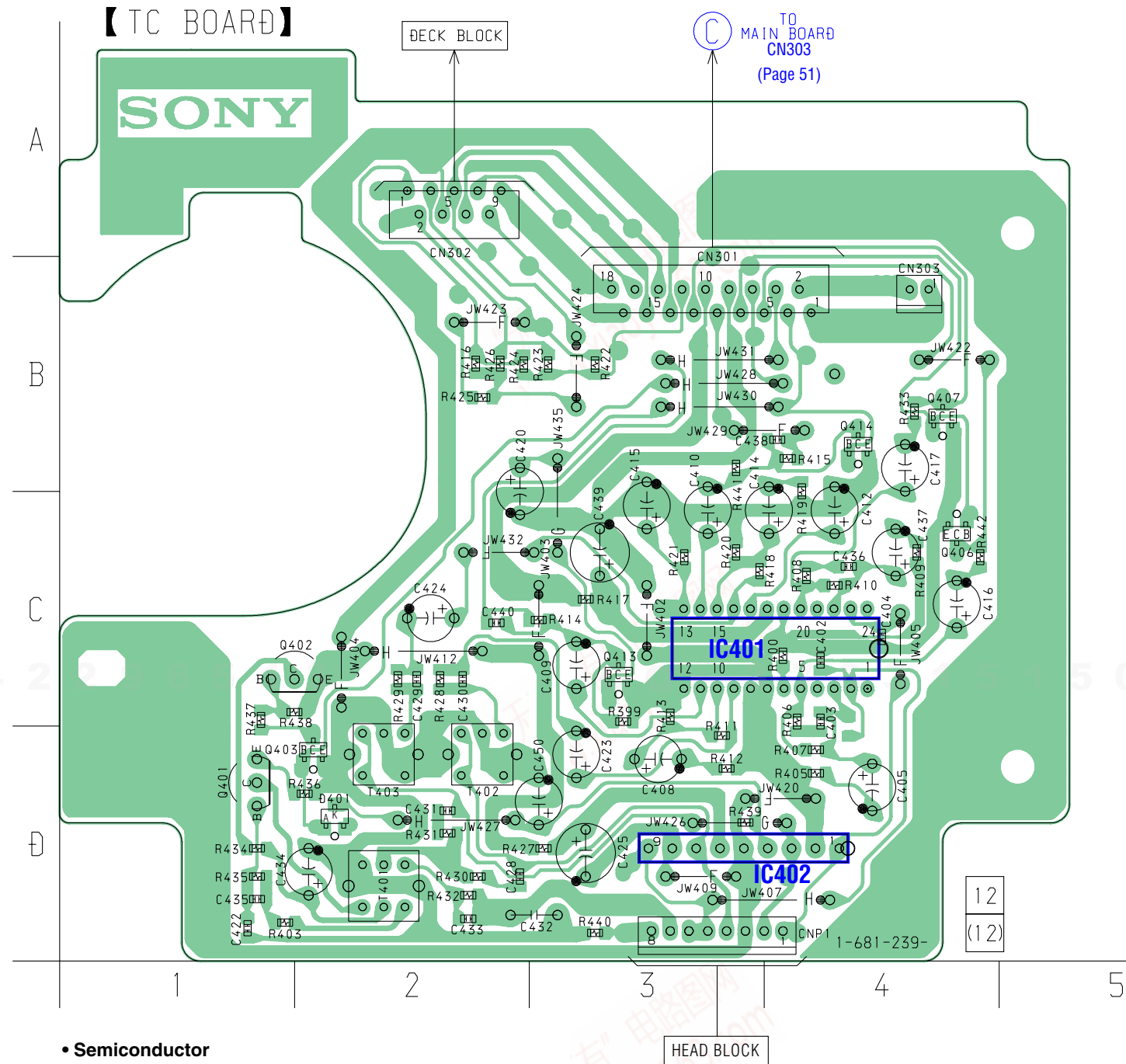


**7-10. SCHEMATIC DIAGRAM – AUDIO SECTION (2/2) – • See page 61 for IC Block Diagrams.**





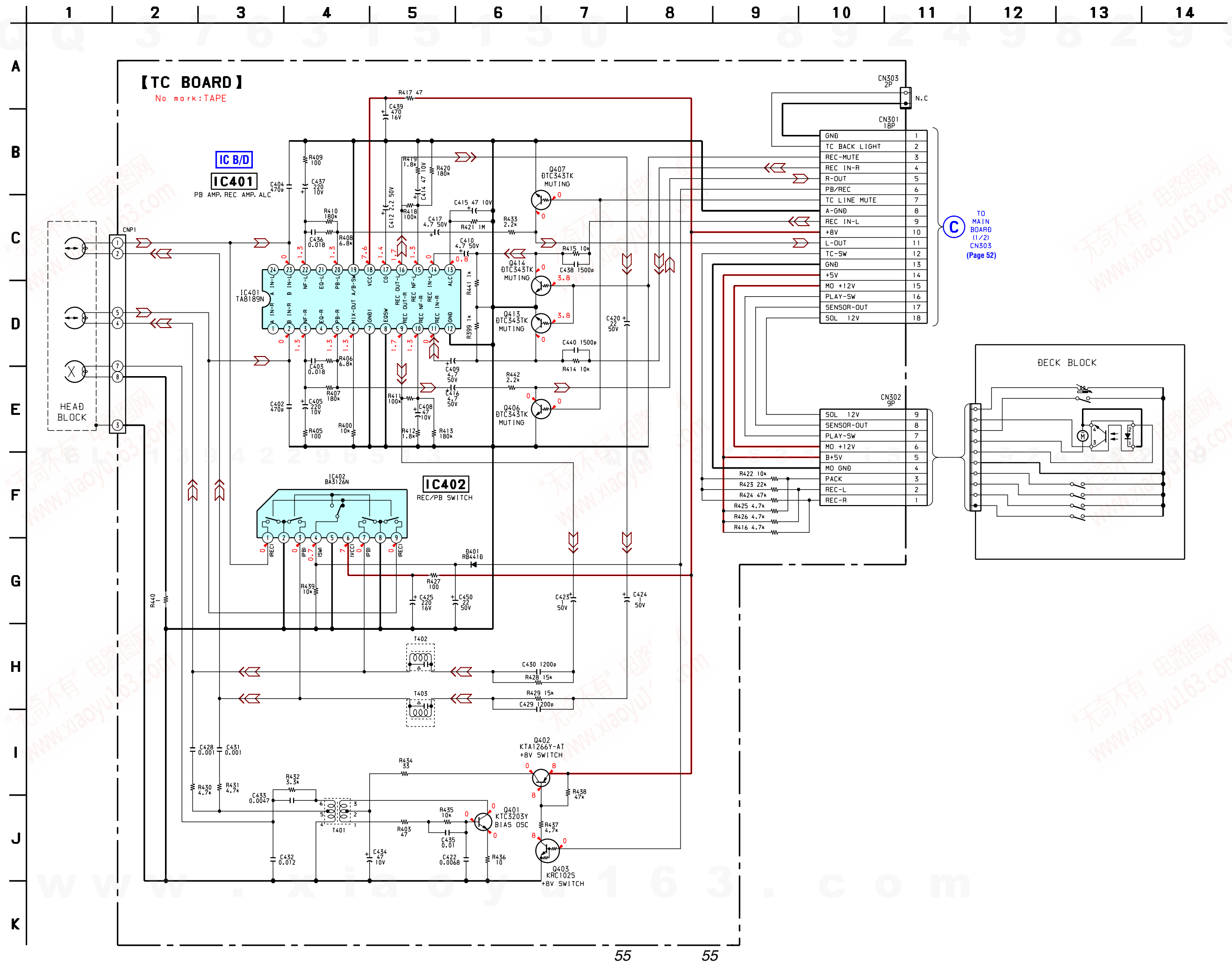
**7-11. PRINTED WIRING BOARD – TC BOARD –** • See page 40 for Circuit Boards Location.



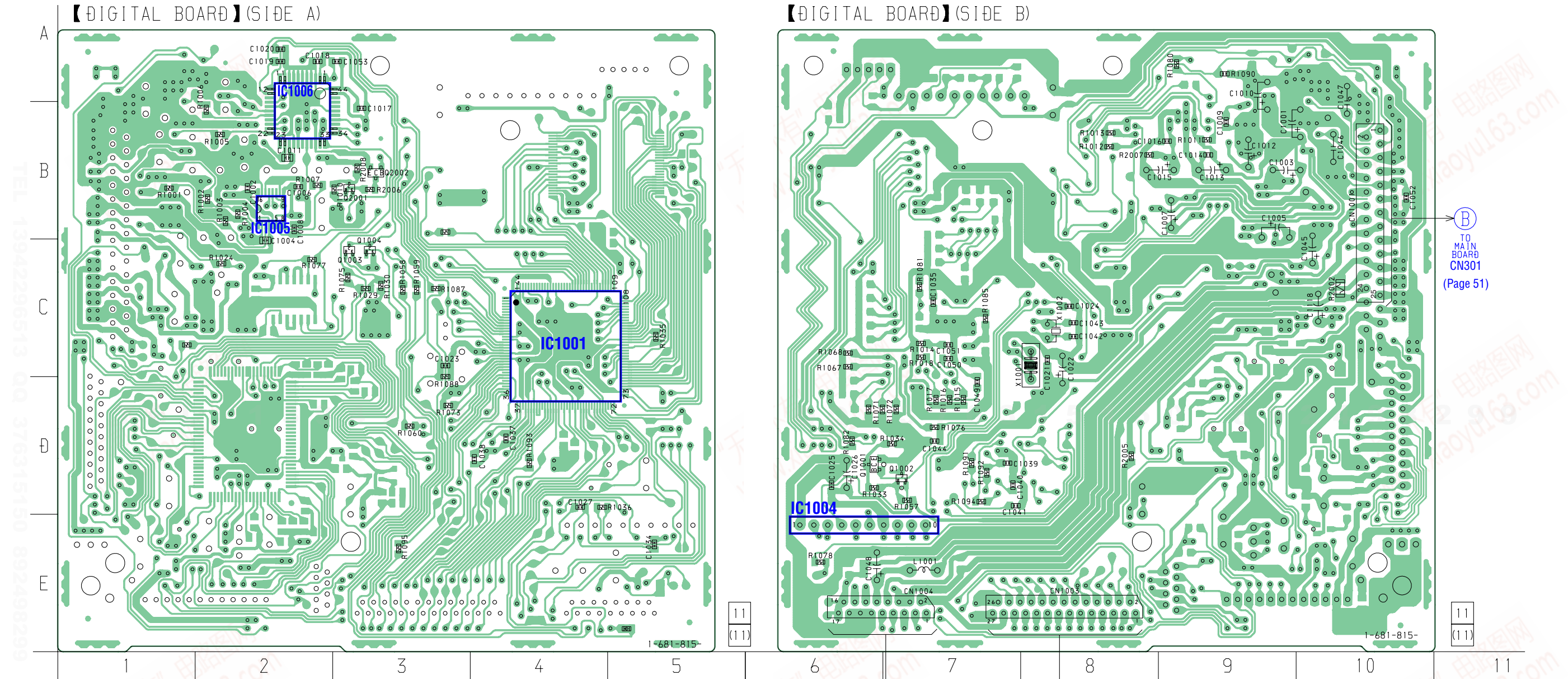
- **Semiconductor Location**

Ref. No.	Location
D401	D-2
IC401	C-4
IC402	D-3
Q401	D-1
Q402	C-2
Q403	D-1
Q406	C-4
Q407	B-4
Q413	C-3
Q414	B-4

7-12. SCHEMATIC DIAGRAM – TC BOARD – • See page 61 for IC Block Diagrams.



Q Q 3 7 6 3 1 5 1 5 0 8 9 2 4 9 8 2 9 9

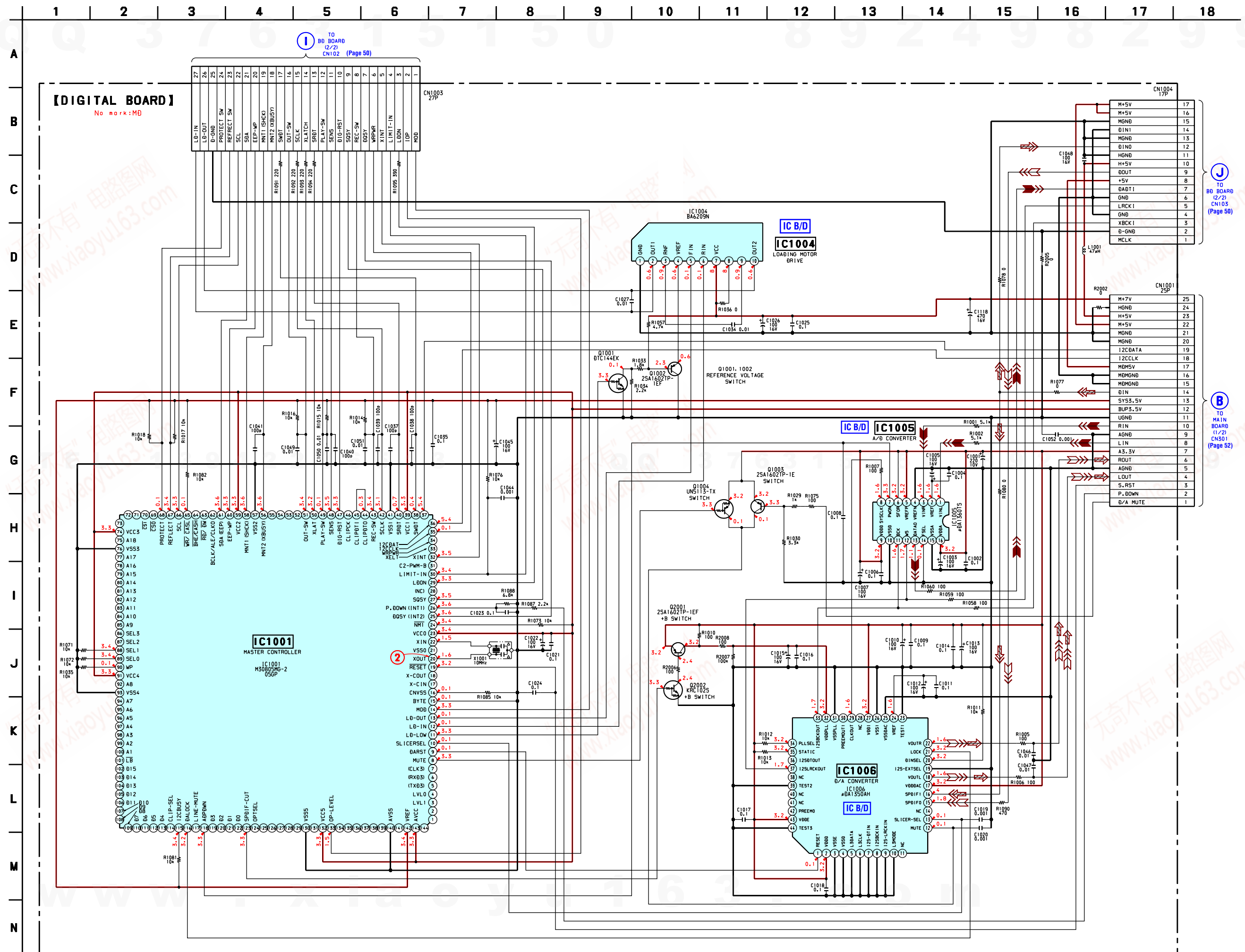


• Semiconductor Location

Ref. No.	Location
IC1001	C-4
IC1004	D-5
IC1005	B-2
IC1006	A-2
Q1001	D-6
Q1002	D-7
Q1003	C-3
Q1004	B-3
Q2001	B-3
Q2002	B-3

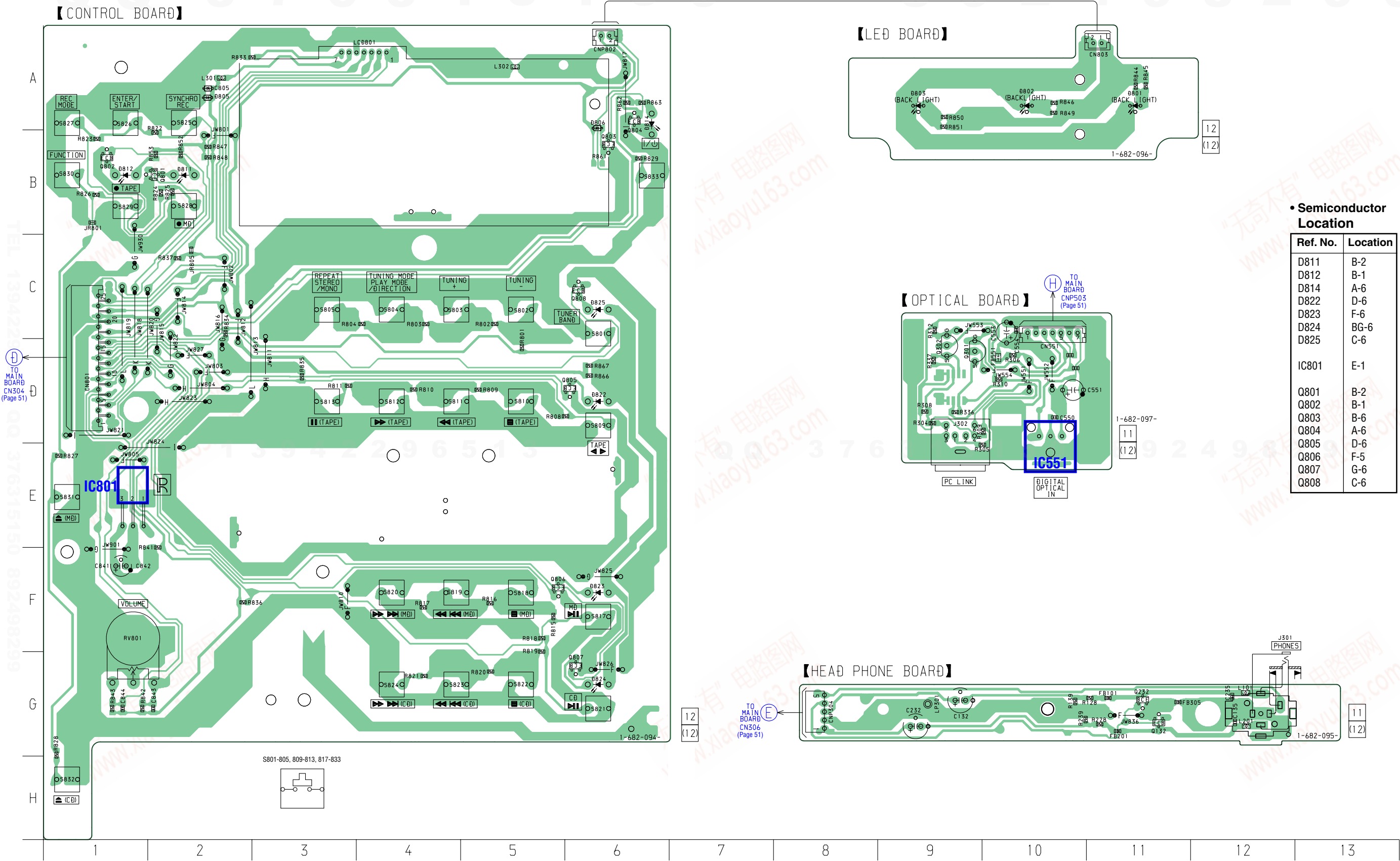


7-14. SCHEMATIC DIAGRAM – DIGITAL BOARD – • See page 41 for Waveforms. • See page 62 for IC Block Diagrams. • See page 69 for IC Pin Function Description.

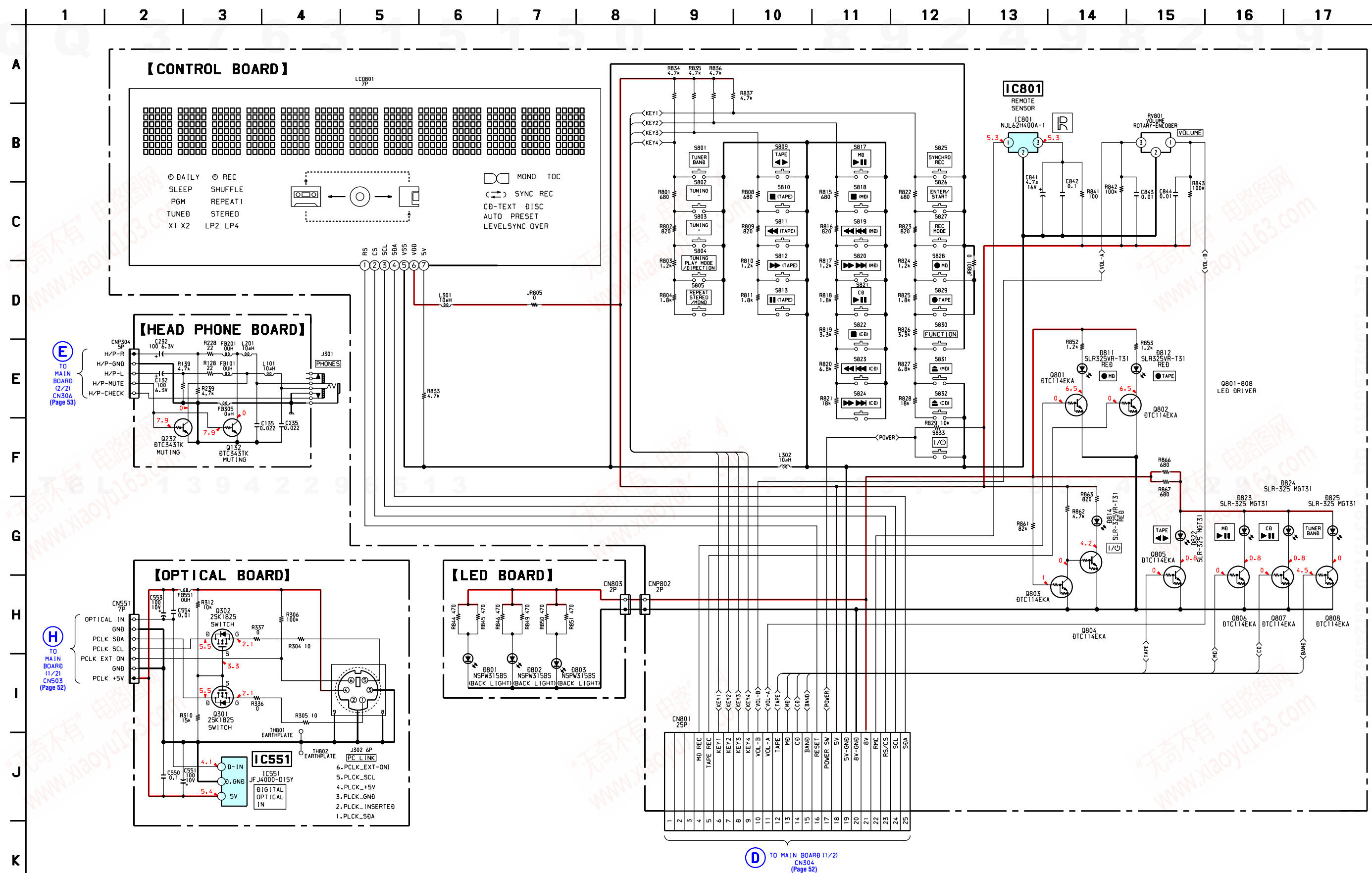




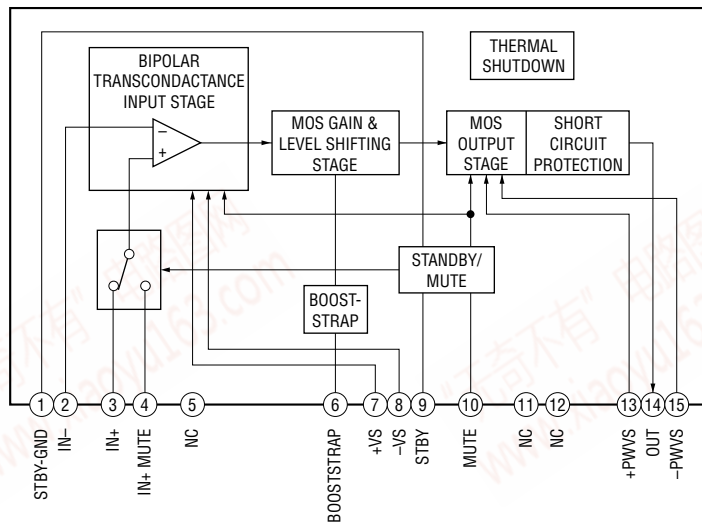
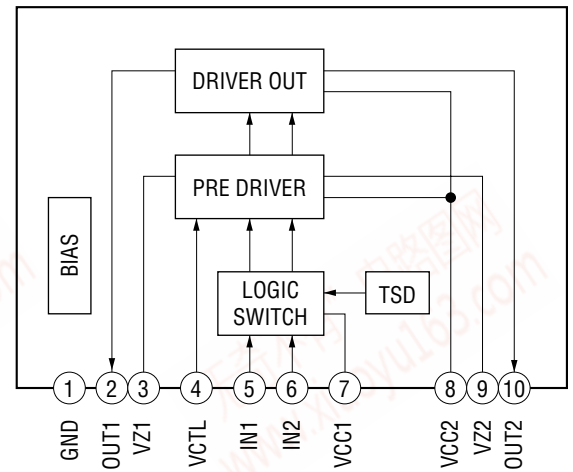
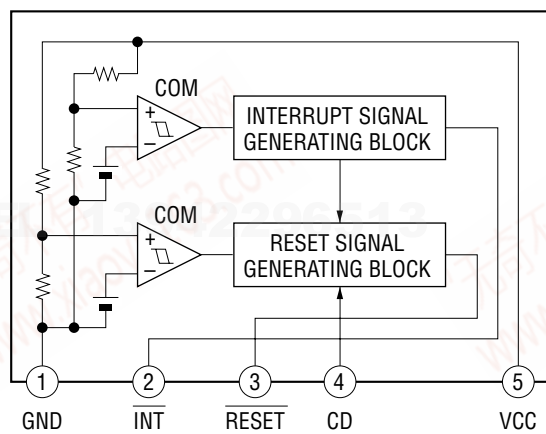
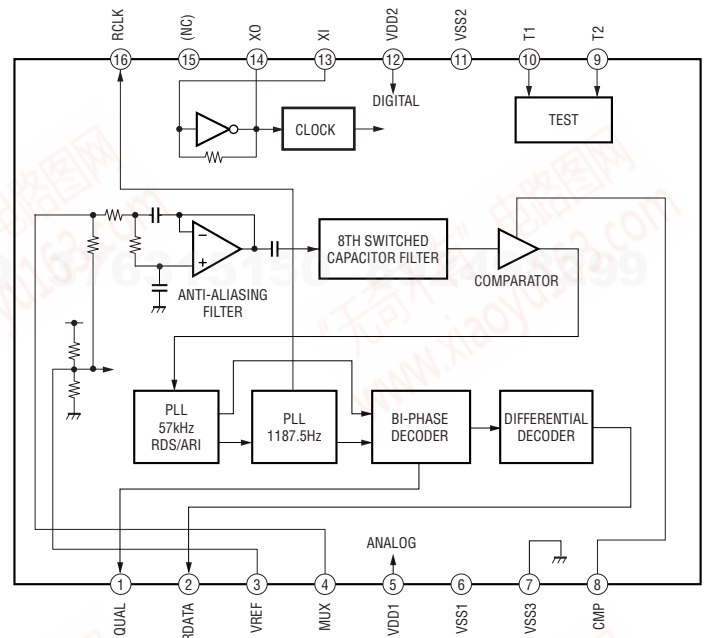
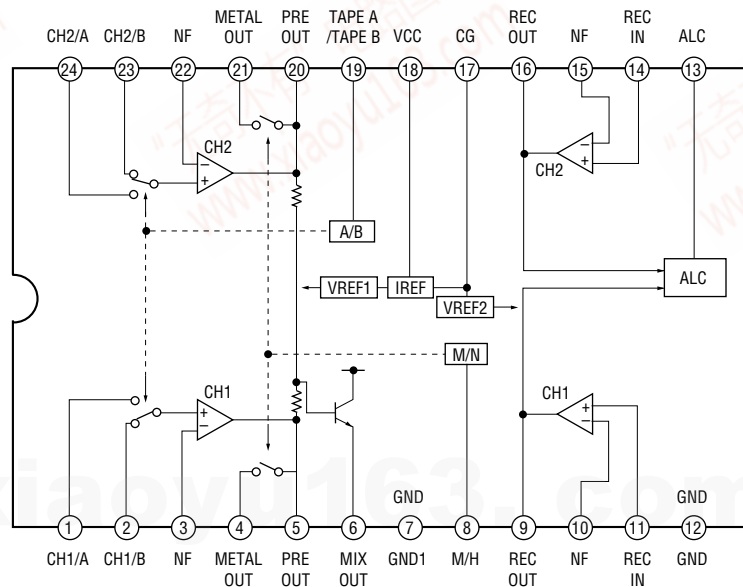
7-15. PRINTED WIRING BOARDS – CONTROL SECTION – • See page 40 for Circuit Boards Location.



### 7-16. SCHEMATIC DIAGRAM – CONTROL SECTION –

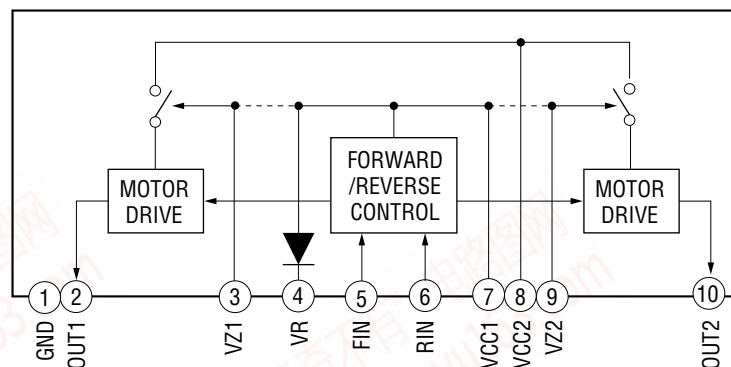
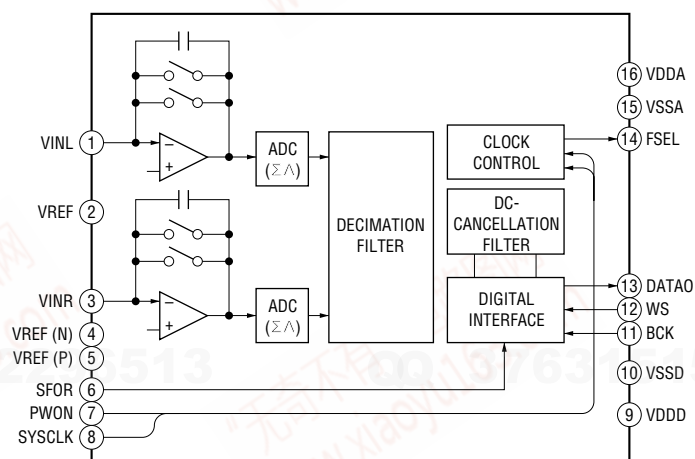
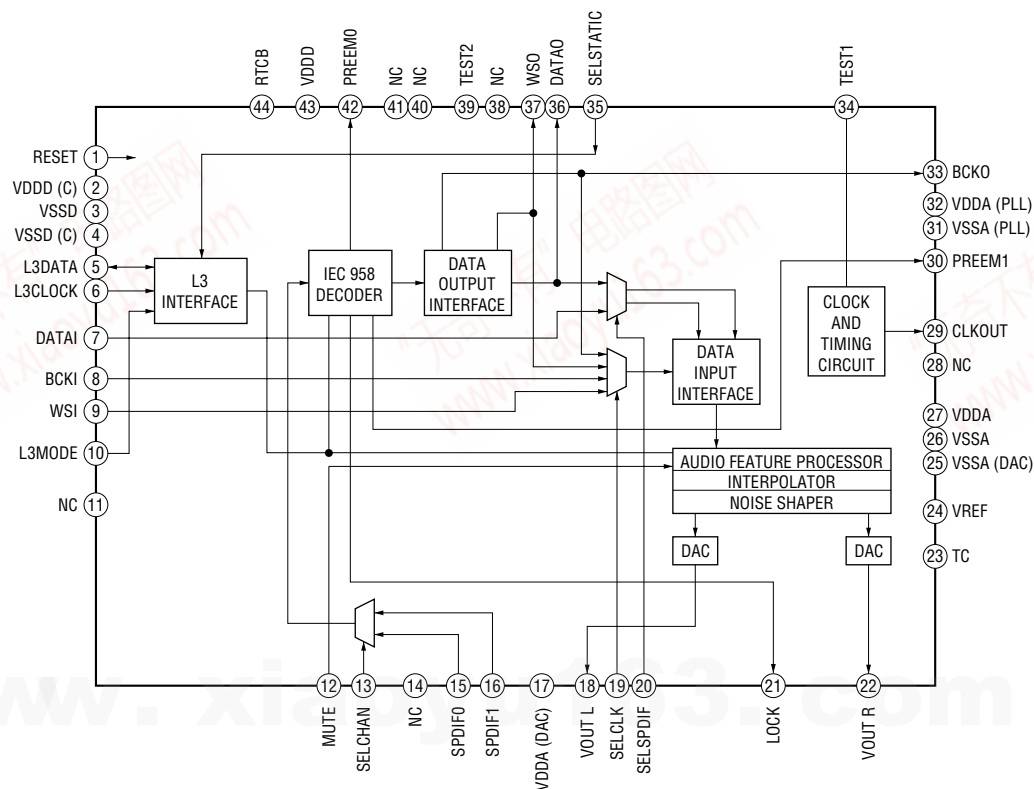


<http://www.xiaoyu163.com>

**7-19. IC BLOCK DIAGRAMS**
**IC101, 201 TDA7296**

**IC307 KA3082**

**IC308 M62016L**

**IC309 BU1924F**

**IC401 TA8189N**




IC1004 BA6209N

IC1005  $\mu$ DA1360TSIC1006  $\mu$ DA1350AH

## 7-20. IC PIN FUNCTION DESCRIPTION

## • IC101 CXA2523AR RF AMPLIFIER (BD BOARD)

Pin No.	Pin Name	I/O	Description
1	I	I	I-V converted RF signal I input
2	J	I	I-V converted RF signal J input
3	VC	O	Middle point voltage (+1.5V) generation output
4 to 9	A to F	I	Signal input from the optical pick-up detector
10	PD	I	Light amount monitor input
11	APC	O	Laser APC output
12	APCREF	I	Reference voltage input for setting laser power
13	GND	—	Ground
14	TEMPI	I	Temperature sensor connection
15	TEMPR	O	Reference voltage output for the temperature sensor
16	SWDT	I	Serial data input from the CXD2662R
17	SCLK	I	Serial clock input from the CXD2662R
18	XLAT	I	Latch signal input from the CXD2662R "L": Latch
19	XSTBY	I	Stand by signal input "L": Stand by
20	FOCNT	I	Center frequency control voltage input of BPF22, BPF3T, EQ from the CXD2662R
21	VREF	O	Reference voltage output (Not used)
22	EQADJ	I/O	Center frequency setting pin for the internal circuit EQ
23	3TADJ	I/O	Center frequency setting pin for the internal circuit BPF3T
24	Vcc	—	+3V power supply
25	WBLADJ	I/O	Center frequency setting pin for the internal circuit BPF22
26	TE	O	Tracking error signal output to the CXD2662R
27	CSLED	—	External capacitor connection pin for the sled error signal LPF
28	SE	O	Sled error signal output to the CXD2662R
29	ADFM	O	FM signal output of ADIP
30	ADIN	I	ADIP signal comparator input ADFM is connected with AC coupling
31	ADAGC	—	External capacitor connection pin for AGC of ADIP
32	ADFG	O	ADIP duplex signal output to the CXD2662R
33	AUX	O	I3 signal/temperature signal output to the CXD2662R (Switching with a serial command)
34	FE	O	Focus error signal output to the CXD2662R
35	ABCD	O	Light amount signal output to the CXD2662R
36	BOTM	O	RF/ABCD bottom hold signal output to the CXD2662R
37	PEAK	O	RF/ABCD peak hold signal output to the CXD2662R
38	RF	O	RF equalizer output to the CXD2662R
39	RFAGC	—	External capacitor connection pin for the RF AGC circuit
40	AGCI	I	Input to the RF AGC circuit The RF amplifier output is input with AC coupling
41	COMPO	O	User comparator output (Not used)
42	COMPP	I	User comparator input (Fixed at "L")
43	ADDC	I/O	External capacitor pin for cutting the low band of the ADIP amplifier
44	OPO	O	User operation amplifier output (Not used)
45	OPN	I	User operation amplifier inversion input (Fixed at "L")
46	RFO	O	RF amplifier output
47	MORFI	I	Groove RF signal is input with AC coupling
48	MORFO	O	Groove RF signal output

## • Abbreviation

APC: Auto Power Control

AGC: Auto Gain Control

# HCD-J300

## • IC151 CXD2662R DIGITAL SIGNAL PROCESSOR, DIGITAL SERVO SIGNAL PROCESSOR (BD BOARD)

Pin No.	Pin Name	I/O	Description
1	MNT0 (FOK)	O	Function FOK signal output to the system control (monitor output) “H” is output when focus is on (Not used)
2	MNT1 (SHCK)	O	Track jump detection signal output to the system control (monitor output)
3	MNT2 (XBUSY)	O	Monitor 2 output to the system control (monitor output)
4	MNT3 (SLOC)	O	Monitor 3 output to the system control (monitor output) (Not used)
5	SWDT	I	Writing data signal input from the system control
6	SCLK	I (S)	Serial clock signal input from the system control
7	XLAT	I (S)	Serial latch signal input from the system control
8	SRDT	O (3)	Reading data signal output to the system control
9	SENS	O (3)	Internal status (SENSE) output to the system control
10	XRST	I (S)	Reset signal input from the system control “L”: Reset
11	SQSY	O	Subcode Q sync (SCOR) output to the system control “L” is output every 13.3 msec. Almost all, “H” is output
12	DQSY	O	Digital In U-bit CD format or MD format subcode Q sync (SCOR) output to the system control
13	RECP	I	Laser power switching input from the system control “H”: Recording, “L”: Playback
14	XINT	O	Interrupt status output to the system control
15	TX	I	Recording data output enable input from the system control
16	OSCI	I	System clock input (512Fs=22.5792 MHz)
17	OSCO	O	System clock output (512Fs=22.5792 MHz) (Not used)
18	XTSL	I	System clock frequency setting “L”: 45.1584 MHz, “H”: 22.5792 MHz (Fixed at “H”)
19	DIN0	I	Digital audio input (Optical input)
20	DIN1	I	Digital audio input (Optical input) (Fixed at “L”)
21	DOUT	O	Digital audio output (Optical output) (Open)
22	DADTI	I	Serial data input (Fixed at “L”)
23	LRCKI	I	LR clock input “H” : Lch, “L” : R ch (Fixed at “L”)
24	XBCKI	I	Serial data clock input (Fixed at “L”)
25	ADDT	I	Data input from the A/D converter
26	DADT	O	Data output to the D/A converter (Not used)
27	LRCK	O	LR clock output for the A/D and D/A converter (44.1 kHz) (Not used)
28	XBCK	O	Bit clock output to the A/D and D/A converter (2.8224 MHz)
29	FS256	O	11.2896 MHz clock output (Not used)
30	DVDD	—	+3V power supply (Digital)
31 to 34	A03 to A00	O	DRAM address output
35	A10	O	DRAM address output
36 to 40	A04 to A08	O	DRAM address output
41	A11	O	DRAM address output (Not used)
42	DVSS	—	Ground (Digital)
43	XOE	O	Output enable output for DRAM
44	XCAS	O	$\overline{\text{CAS}}$ signal output for DRAM
45	A09	O	Address output for DRAM
46	XRAS	O	$\overline{\text{RAS}}$ signal output for DRAM
47	XWE	O	Write enable signal output for DRAM

\* I (S) stands for Schmidt input, I (A) for analog input, O (3) for 3-state output, and O (A) for analog output in the column I/O

Pin No.	Pin Name	I/O	Description
48	D1	I/O	Data input/output for DRAM
49	D0	I/O	
50, 51	D2, D3	I/O	
52	MVCI	I (S)	Clock input from an external VCO (Fixed at “L”)
53	ASYO	O	Playback EFM duplex signal output
54	ASYI	I (A)	Playback EFM comparator slice level input
55	AVDD	—	+3V power supply (Analog)
56	BIAS	I (A)	Playback EFM comparator bias current input
57	RFI	I (A)	Playback EFM RF signal input
58	AVSS	—	Ground (Analog)
59	PCO	O (3)	Phase comparison output for the recording/playback EFM master PLL
60	FILI	I (A)	Filter input for the recording/playback EFM master PLL
61	FILO	O (A)	Filter output for the recording/playback EFM master PLL
62	CLTV	I (A)	Internal VCO control voltage input for the recording/playback EFM master PLL
63	PEAK	I (A)	Light amount signal peak hold input from the CXA2523AR
64	BOTM	I (A)	Light amount signal bottom hold input from the CXA2523AR
65	ABCD	I (A)	Light amount signal input from the CXA2523AR
66	FE	I (A)	Focus error signal input from the CXA2523AR
67	AUX1	I (A)	Auxiliary A/D input
68	VC	I (A)	Middle point voltage (+1.5V) input from the CXA2523AR
69	ADIO	O (A)	Monitor output of the A/D converter input signal (Not used)
70	AVDD	—	+3V power supply (Analog)
71	ADRT	I (A)	A/D converter operational range upper limit voltage input (Fixed at “H”)
72	ADRB	I (A)	A/D converter operational range lower limit voltage input (Fixed at “L”)
73	AVSS	—	Ground (Analog)
74	SE	I (A)	Sled error signal input from the CXA2523AR
75	TE	I (A)	Tracking error signal input from the CXA2523AR
76	DCHG	I (A)	Connected to +3V power supply
77	APC	I (A)	Error signal input for the laser digital APC (Fixed at “L”)
78	ADFG	I (S)	ADIP duplex FM signal input from the CXA2523AR (22.05 ± 1 kHz)
79	F0CNT	O	Filter f0 control output to the CXA2523AR
80	XLRF	O	Control latch output to the CXA2523AR
81	CKRF	O	Control clock output to the CXA2523AR
82	DTRF	O	Control data output to the CXA2523AR
83	APCREF	O	Reference PWM output for the laser APC
84	TEST0	O	PWM output for the laser digital APC (Not used)
85	TRDR	O	Tracking servo drive PWM output (—)

- Abbreviation  
EFM: Eight to Fourteen Modulation  
PLL : Phase Locked Loop  
VCO: Voltage Controlled Oscillator



**HCD-J300**

Pin No.	Pin Name	I/O	Description
86	TFDR	O	Tracking servo drive PWM output (+)
87	DVDD	—	+3V power supply (Digital)
88	FFDR	O	Focus servo drive PWM output (+)
89	FRDR	O	Focus servo drive PWM output (–)
90	FS4	O	176.4 kHz clock signal output (X’tal) (Not used)
91	SRDR	O	Sled servo drive PWM output (–)
92	SFDR	O	Sled servo drive PWM output (+)
93	SPRD	O	Spindle servo drive PWM output (–)
94	SPFD	O	Spindle servo drive PWM output (+)
95	FGIN	I (S)	Test input (Fixed at “L”)
96 to 98	TEST1 to TEST3	I	
99	DVSS	—	Ground (Digital)
100	EFMO	O	EFM output when recording

- Abbreviation

EFM: Eight to Fourteen Modulation

## • IC306 M30622MGA-A66FP MASTER CONTROL (MAIN BOARD)

Pin No.	Pin Name	I/O	Description
1	AC-CUT	I	AC CUT ON/OFF check signal input (L=ON,H=OFF)
2	POWER-ON	O	Power relay ON/OFF signal output (H=ON,L=OFF)
3	XTSL	O	XTSL signal output for IC101
4	SIRCS	I	Remote control receiver data signal input
5	DA_MUTE	O	D/A (MD) muting control signal output
6	SOL_CON	O	Solenoid(TC) control signal output (H=ON,L=OFF)
7	CAPM-CNT1	O	Capstan motor control signal output (H=REV,L=FWD,L=STOP)
8	BYTE	—	Not used (ground)
9	CNVSS	—	Connected ground
10	XCIN	I	Sub clock input
11	XCOUT	O	Sub clock output
12	RESET	I	System reset signal input
13	XOUT	O	Main system clock output
14	VSS	—	Ground
15	XIN	I	Main system clock input (16MHz)
16	VCC	—	Power supply (+5V)
17	NMI	I	Not used (connected to Vcc)
18	RDS-INT	I	RDS interrupt signal input
19	CD-SCOR	I	CD Q-data request signal input
20	MDM_POWER	O	MD P-DOWN control signal output
21	OPT-SEL	O	Optical select signal output
22	CD-XLT	O	CD latch signal output
23	CD-SENS	I	CD sense signal input
24	BU_PWM3	O	BU PWM3 signal output
25	LD_ON	O	CD LD ON signal output
26	BU_PWM2	O	BU PWM2 signal output
27	CD-CLK	O	CD clock signal output
28	BU_PWM1	O	BU PWM1 signal output
29	IIC_CLK	O	IIC clock signal output
30	IIC_DATA	O	IIC data signal output
31	FLS_SO	—	Not used (open)
32	SQ-DATA-IN	I	CD SQ data signal input
33	SQ-CLK	O	CD SQ clock signal output
34	CD-DATA	O	CD data signal output
35	LCD-DATA	O	LCD data signal output
36	LCD-CS	O	LCD CS signal output
37	LCD-SCK	O	LCD clock signal output
38	TC-MUTE	O	Tape deck line muting signal output (H=ON,L=OFF)
39	CD_XRST	O	CD reset signal output
40	IN SW	I	Tray close detect signal input
41	OPEN SW	I	Tray open detect signal input
42	TRAY-CLOSE	O	Loading motor control signal output
43	TRAY-OPEN	O	Loading motor control signal output
44	REC/PB/PASS	O	REC/PB/PASS select signal output
45	B_PLAY	I	B deck play signal input
46	OPT-SEL	—	Not used (Fixed at "H")
47	(DOLBY-ON)	—	Not used
48	REC MUTE	O	TC REC muting ON/OFF signal output
49	MD RESET	O	MD reset signal output
50	CD-POWER	O	CD power control signal output (H=ON,L=OFF)
51	RDS-DATA	I	RDS data signal input

**HCD-J300**

Pin No.	Pin Name	I/O	Description
52	H/P_CHECK	I	Headphone detect signal input
53	H/P_MUTE	O	Headphone muting control signal output
54	AMP_MUTE	O	Power amplifier muting control signal output (L=ON,H=OFF)
55	VOL_CLK	O	Volume clock signal output
56	VOL_DATA	O	Volume data signal output
57	STK_POWER	O	Power amplifier ON/OFF signal output (H=ON,L=OFF)
58	LINE-MUTE	O	Line muting control signal output (H=ON,L=OFF)
59	NC	—	Not used
60	NC	—	Not used
61	NC	—	Not used
62	VCC	—	Power supply (+5V)
63	NC	—	Not used
64	VSS	—	Ground
65	NC	—	Not used
66	FM_ON	O	FM ON/OFF signal output (H=ON,L=OFF)
67	TU_ON	O	Tuner power ON/OFF signal output (H=ON,L=OFF)
68	TUNED	I	TUNED detect signal input
69	ST_DOUT	I	Tuner data signal input
70	ST_CLK	O	Tuner clock output
71	ST_DIN	O	Tuner data signal output
72	ST_CE	O	Tuner chip enable output
73	NC	—	Not used
74	POWER_KEY	I	Power key detect signal input
75	PC_POWER	I	PC power detect signal input for PC LINK
76	LCD_BACK_LIGHT	O	LCD back light LED control signal output
77	LCD-RS	O	LCD reset signal output
78	TUNER-LED	O	Tuner LED control signal output
79	CD_LED	O	CD LED control signal output
80	MD_LED	O	MD LED control signal output
81	TC_LED	O	TC LED control signal output
82	VOL_A	I	Volume signal input from rotary encoder
83	VOL_B	I	Volume signal input from rotary encoder
84	TAPE REC	O	TAPE REC LED control signal output
85	MD REC	O	MD REC LED control signal output
86	TREBLE-B	I	TREBLE signal input from rotary encoder
87	MD_INDICATOR_LED	O	MD INDICATOR LED control signal output
88	DSG-LED	O	DSG LED control signal output
89	KEY0	I	Key input signal from function switch
90	KEY1	I	Key input signal from function switch
91	KEY2	I	Key input signal from function switch
92	KEY3	I	Key input signal from function switch
93	B-SHUT(SENSOR)	I	B deck reel pulse signal input
94	B_HALF/REC	I	B deck half detect signal input
95	MODEL_IN	I	Model input
96	AG	—	Analog ground
97	SPEC_IN	I	Version select input
98	VREF	—	Analog voltage reference
99	AVCC	—	Analog power supply
100	SOFT_TEST	O	Soft check output (open)

**• IC1001 M30805MG-205GP SYSTEM CONTROL (DIGITAL BOARD)**

Pin No.	Pin Name	I/O	Description
1	—	—	Not used
2	—	—	Not used
3	LVLI	—	Not used
4	LVL0	—	Not used
5	(TXD3)	—	Not used
6	(RXD3)	—	Not used
7	(CLK3)	—	Not used
8	MUTE	O	Line out muting output L: Muting
9	DARST	O	Reset signal output to the D/A converter L: Active
10	SLICERSEL	O	IEC958 input select signal output to the D/A converter L: CD H: MD
11	LD-LOW	O	Loading motor voltage control output L: High voltage H: Low voltage
12	LDIN	I	Loading motor control input H: IN
13	LDOUT	O	Loading motor control output H: OUT
14	MOD	O	Laser modulation switching signal output L: OFF H: ON
15	BYTE	I	Data bus changed input (Connected to ground)
16	CNVSS	—	Ground
17	X-CIN	O	Sub clock input (32.768kHz) (Not used)
18	X-COUT	O	Sub clock output (32.768kHz) (Not used)
19	RESET	I	System rest input L : ON
20	XOUT	O	Main clock output (10MHz)
21	VSS0	—	Ground
22	XIN	I	Main clock input (10MHz)
23	VCC0	—	Power supply (+3.3V)
24	NMI	I	Fixed at H (Pull-up)
25	DQSY	I	Digital in sync input (Record system)
26	P.DOWN	I	Power down detection input L: Power down
27	SQSY	I	ADIP (MO) sync or subcode Q (PIT) sync input from CXD2662R (Playback system)
28	NC	—	Not used
29	LDON	O	Laser ON/OFF control output H: Laser ON
30	LIMIT-IN	I	Detection input from the limit switch L: Sled limit-In H: Sled limit-Out
31	C2-PWM-B	—	Not used
32	XINIT	I	Interrupt status input from CXD2662R
33	—	—	Not used
34	XELT	I	XELT input from DSP IC
35	WR PWR	O	Write power ON/OFF output L: OFF H: ON
36	IIC CLK	I/O	IIC serial clock input/output
37	IIC DATA	I/O	IIC serial data input/output
38	SWDT	O	Writing data signal output to the serial bus
39	VCC1	—	Power supply (+3.3V)
40	SRDT	I	Reading data signal input from the serial bus
41	VSS1	—	Ground
42	SCLK	O	Clock signal output to the serial bus
43	REC-SW	I	Detection signal input from the recording position detection switch L: REC
44	CLIP DTO	O	CLIP serial data output
45	CLIPDTI	I	CLIP serial data input
46	CLIP CLK	O	CLIP serial clock output (Not used)
47	DIG-RST	O	Digital rest signal output to the CXD2662R and motor driver L: Reset
48	SENS	I	Internal status (SENSE) input from the CXD2662R
49	PLAY-SW	I	Detection signal input from the playback position detection switch L: PLAY
50	XLAT	O	Latch signal output to DSP IC
51	OUT-SW	I	Detection signal input from the loading out detection switch



**HCD-J300**

Pin No.	Pin Name	I/O	Description
52	—	—	Not used
53	—	—	Not used
54	—	—	Not used
55	—	O	Not used
56	MNT2 (XBUSY)	I	In the state of executive command from the CXD2662R
57	VSS2	—	Ground
58	MNT1 (SHCK)	I	Track jump signal input from the CXD2662R
59	VCC2	—	Power supply (+3.3V)
60	EEP-WP	O	EEP-ROM write protect signal output L: write possibility
61	SDA (EEP)	I/O	Data signal input/output pin with the EEPROM
62	BCLK/ALE/CLKO	—	Not used
63	RD/DW	O	Read signal output (Not used)
64	BHE/CASH	—	Not used
65	WR/CASL	O	Write signal output
66	SCL	O	Clock signal output to the EEPROM
67	REFLECT	I	Disk reflection rate detection input from the reflect detection switch H: Disk with low reflection rate
68	PROTECT	I	Recording-protection claw detection input from the protection detection switch H: Protect
69	CS0	O	Chip select signal output to the Flash ROM
70	CS1	O	Not used
71	—	O	Not used
72	A20	O	Address bus signal output to Flash ROM
73	A19	O	Address bus signal output to Flash ROM (Not used)
74	VCC3	—	Power supply (+3.3V)
75	A18	O	Address bus signal output to Flash ROM (Not used)
76	VSS3	—	Ground
77 to 85	A17 to A9	O	Address bus signal output to Flash ROM
86 to 89	SEL 3 to 0	O	Not used
90	WP	O	Write protect signal to the Flash ROM
91	VCC4	—	Power supply (+3.3V)
92	A8	O	Address bus signal output to Flash ROM (Not used)
93	VSS4	—	Ground
94 to 100	A7 to A1	O	Address bus signal output to Flash ROM (Not used)
101	LB	—	Not used
102 to 113	D15 to D4	I/O	Data bus signal input/output to the Flash ROM (Not used)
114	CLIP-SEL	O	Not used
115	IIC BUSY	O	IIC cable connect check L: Active
116	DALOCK	O	LOCK signal input from D/A converter
117	LINE-MUTE	O	Not used
118	ADP DOWN	O	Reset signal output to the A/D converter
119 to 122	D3 to D0	I/O	Data bus signal input/output to the Flash ROM (Not used)
123	SPDIF-CUT	—	Jog dial pulse input from the rotary encoder
124	OPT SEL	O	Optical select signal output
125 to 129	—	—	Not used
130	VSS5	—	Ground
131	—	O	Not used
132	VCC5	—	Power supply (+3.3V)
133	OP-LEVEL	I	Optical Pick-up voltage (current) detect signal input
134 to 139	—	—	Not used
140	AVSS	—	Ground (Analog)
141	—	—	Not used
142	VREF	—	Power supply (+3.3V)
143	AVCC	—	Power supply (+3.3V)
144	NC	I	Not used

## SECTION 8 EXPLODED VIEWS

### NOTE:

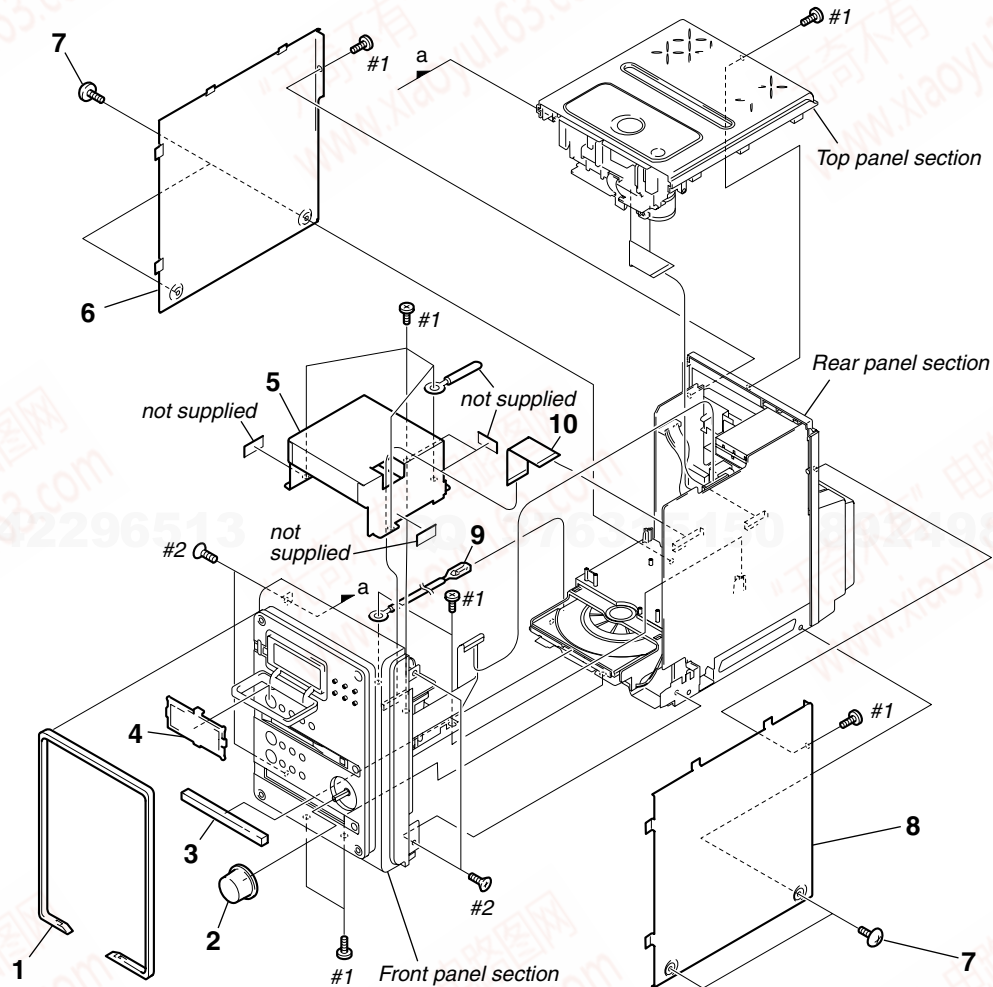
- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Items marked “\*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.

- Abbreviation  
HK : Hong Kong model  
SP : Singapore model  
TW : Taiwan model
- Color Indication of Appearance Parts Example:  
KNOB, BALANCE (WHITE) . . . (RED)

Parts of Color Cabinet's Color

The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety. Replace only with part number specified.

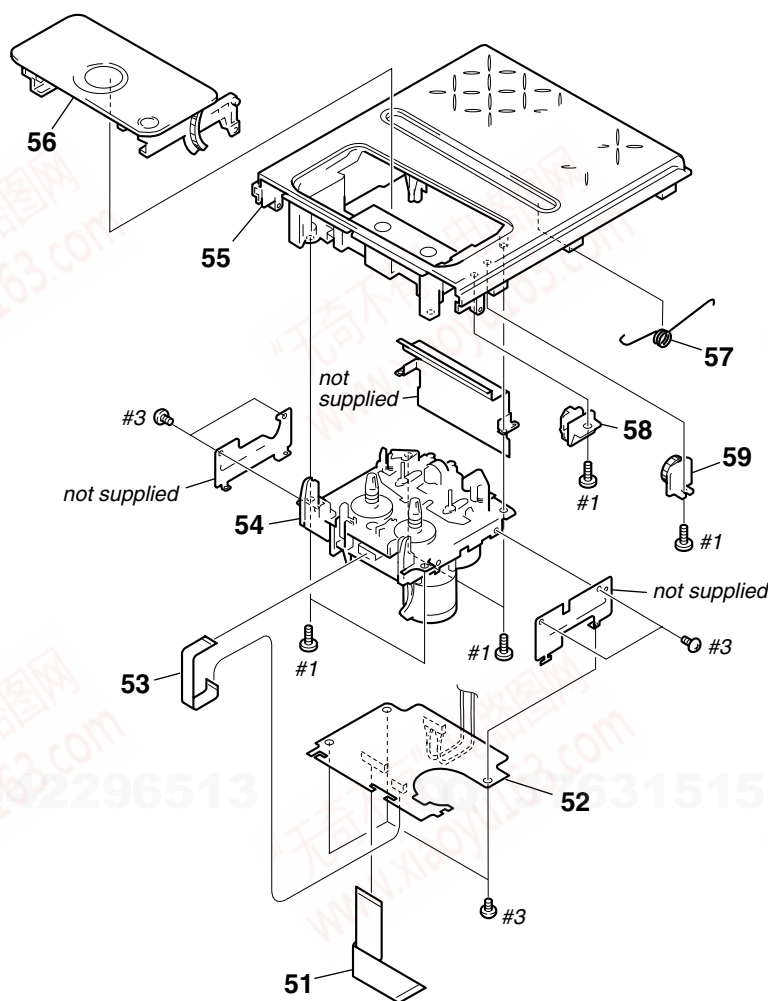
### 8-1. OVERALL SECTION



Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
1	4-235-311-01	FRAME (SILVER)		4	4-235-310-21	WINDOW (LCD) (WHITE) (AEP, UK)	
1	4-235-311-21	FRAME (WHITE) (AEP, UK)		4	4-235-310-41	WINDOW (LCD) (BLACK) (AEP, UK)	
1	4-235-311-41	FRAME (BLACK) (AEP, UK)		5	X-4954-117-2	COVER ASSY, MD	
2	X-4953-931-1	KNOB (VOL) ASSY		6	4-234-555-01	SIDE PANEL (L)	
3	4-235-195-01	LID, CD (SILVER, WHITE)		7	4-221-580-01	SCREW, CASE	
3	4-235-195-11	LID, CD (BLACK) (AEP, UK)		8	4-234-556-01	SIDE PANEL (R)	
4	4-235-310-01	WINDOW (LCD) (SILVER)		9	1-823-147-11	LEAD (WITH CONNECTOR)	

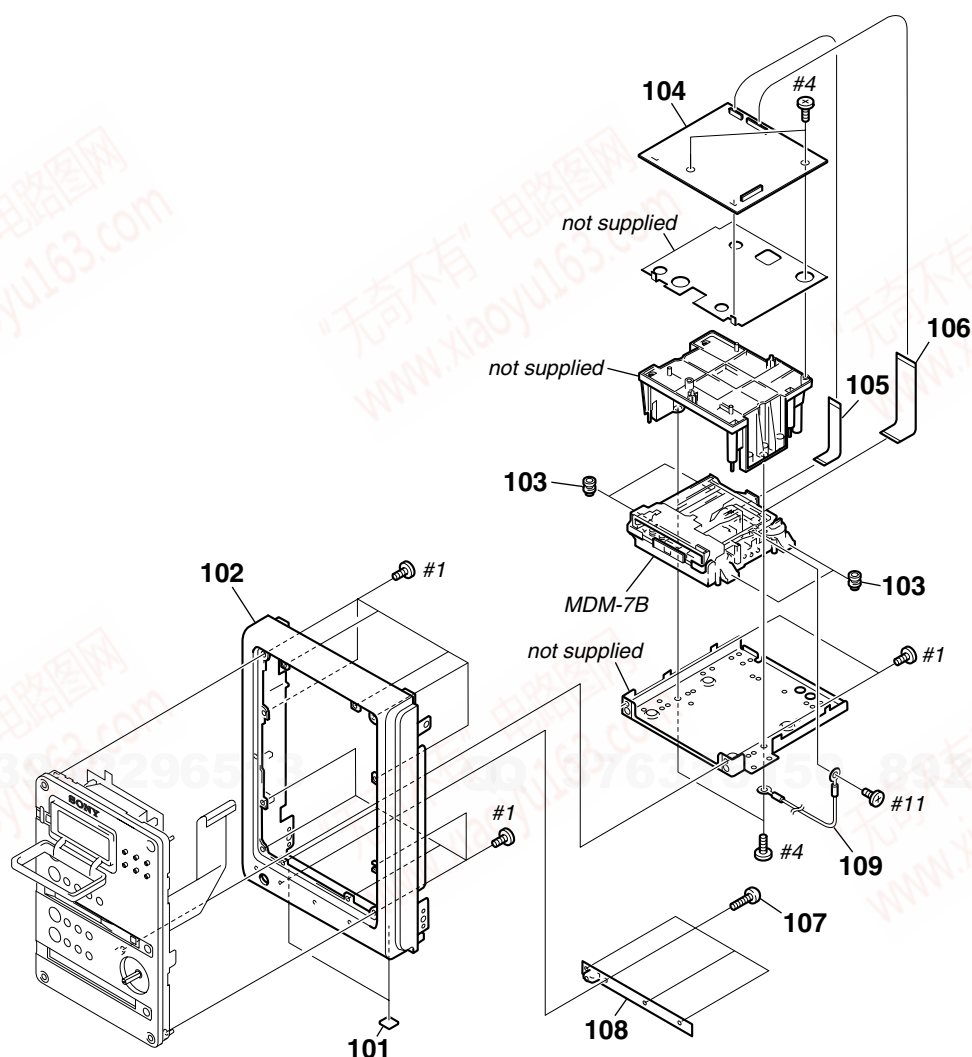
# HCD-J300

## 8-2. TOP PANEL SECTION



Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
51	1-823-094-11	WIRE (FLAT TYPE) (18 CORE)		56	X-4953-925-1	HOLDER ASSY, CASSETTE (WHITE) (AEP, UK)	
52	A-4725-838-A	TC BOARD, COMPLETE		56	X-4953-926-1	HOLDER ASSY, CASSETTE (SILVER)	
53	1-757-809-11	CABLE, FLEXIBLE FLAT (9 CORE)		56	X-4953-927-1	HOLDER ASSY, CASSETTE (BLACK) (AEP, UK)	
54	1-796-101-11	DECK, MECH		57	4-234-564-01	SPRING (CASSETTE OPEN)	
55	X-4953-928-1	PANEL (TOP) SUB ASSY (WHITE) (AEP, UK)		58	X-4953-834-1	PUSH CATCH ASSY	
55	X-4953-929-1	PANEL (TOP) SUB ASSY (SILVER)		59	3-926-926-01	GEAR, DAMPER	
55	X-4953-930-1	PANEL (TOP) SUB ASSY (BLACK) (AEP, UK)					

8-3. FRONT PANEL SECTION-1

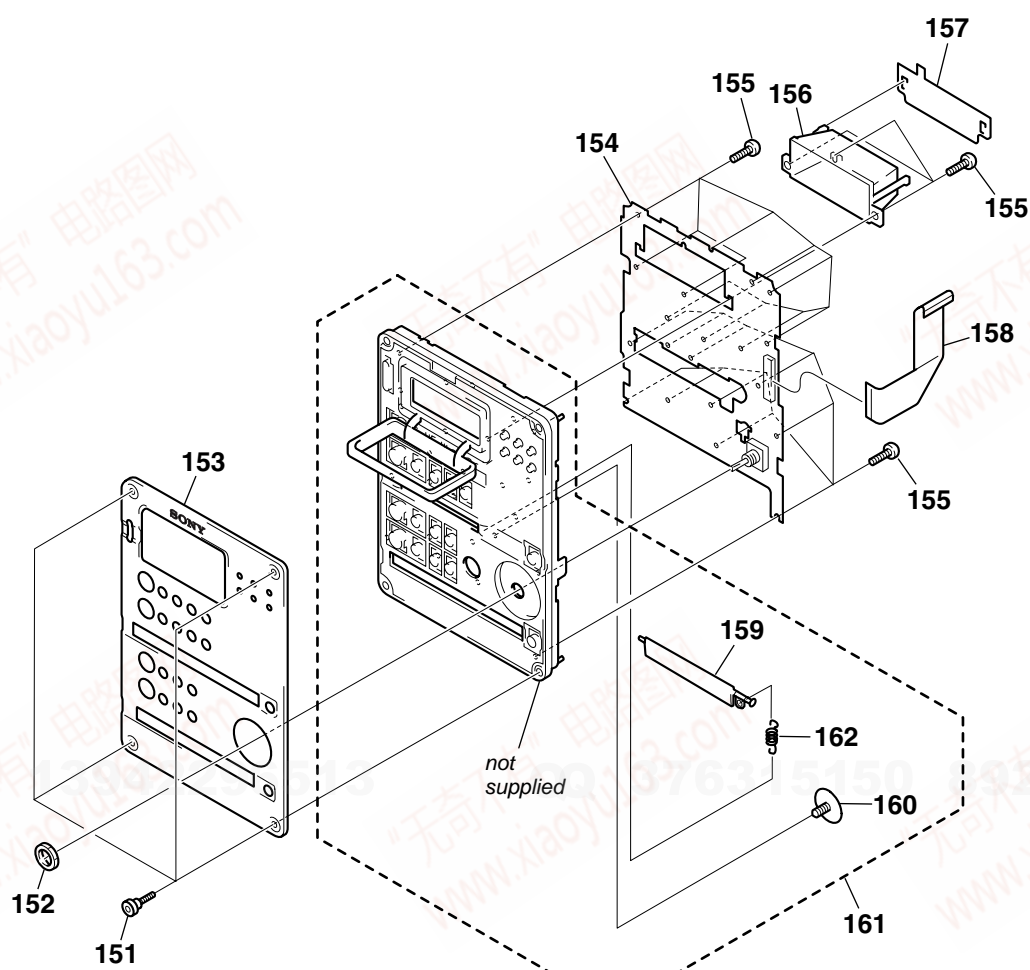


Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
101	4-232-478-01	FOOT		105	1-757-944-11	CABLE, FLEXIBLE FLAT (17 CORE)	
102	4-235-209-01	PANEL, FRONT (WHITE) (AEP, UK)		106	1-757-942-11	CABLE, FLEXIBLE FLAT (27 CORE)	
102	4-235-209-11	PANEL, FRONT (SILVER)		107	7-685-134-19	SCREW(DIA.2.6X8)(IT3B),TAPPING	
102	4-235-209-21	PANEL, FRONT (BLACK) (AEP, UK)		108	1-682-095-11	HEAD PHONE BOARD	
103	4-231-555-01	INSULATOR		109	1-823-146-11	LEAD (WITH CONNECTOR)	
104	A-4725-834-A	DIGITAL BOARD, COMPLETE					



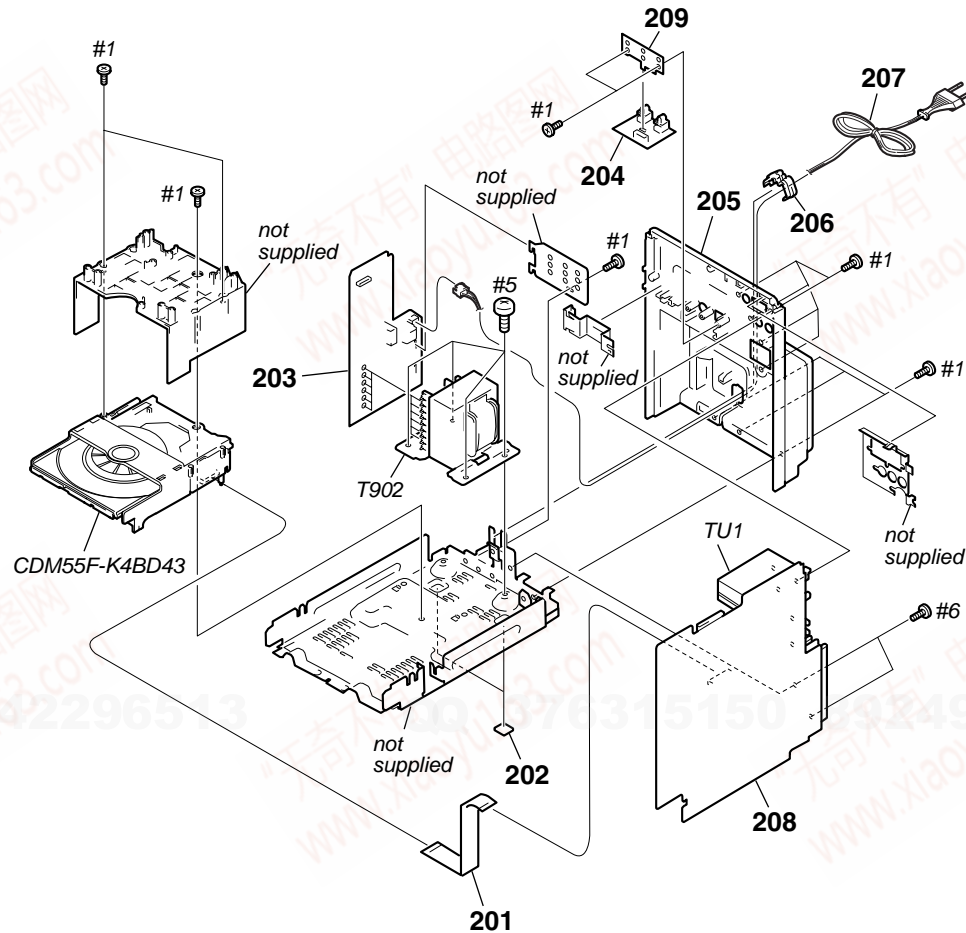
# HCD-J300

## 8-4. FRONT PANEL SECTION-2



Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
151	4-235-207-01	BOLT (M3)		156	4-235-202-01	LCD HOLDER (R)	
152	4-226-047-01	NUT, HEXAGON		157	1-682-096-11	LED BOARD	
153	X-4953-932-1	FRONT (W) ASSY (WHITE)		158	1-757-701-11	WIRE (FLAT TYPE) (25 CORE)	
153	X-4953-933-1	FRONT (AL) ASSY (SILVER)		159	4-235-223-01	LID, MD	
153	X-4953-934-1	FRONT (CR) ASSY (BLACK)		160	3-229-336-01	SCREW, +BVWH TAPPING	
153	X-4954-068-1	PANEL (W) ASSY (WHITE)		161	X-4953-917-1	PANEL (MAIN) ASSY (WHITE)	
153	X-4954-069-1	PANEL (AL) ASSY (SILVER)		161	X-4953-918-1	PANEL (MAIN) ASSY (SILVER)	
153	X-4954-070-1	PANEL (CR) ASSY (BLACK)		161	X-4953-919-1	PANEL (MAIN) ASSY (BLACK)	
154	A-4726-242-A	CONTROL BOARD, COMPLETE		162	4-234-561-01	SPRING (MD LID)	
155	7-685-134-19	SCREW(DIA.2.6X8)(IT3B),TAPPING					

## 8-5. REAR PANEL SECTION

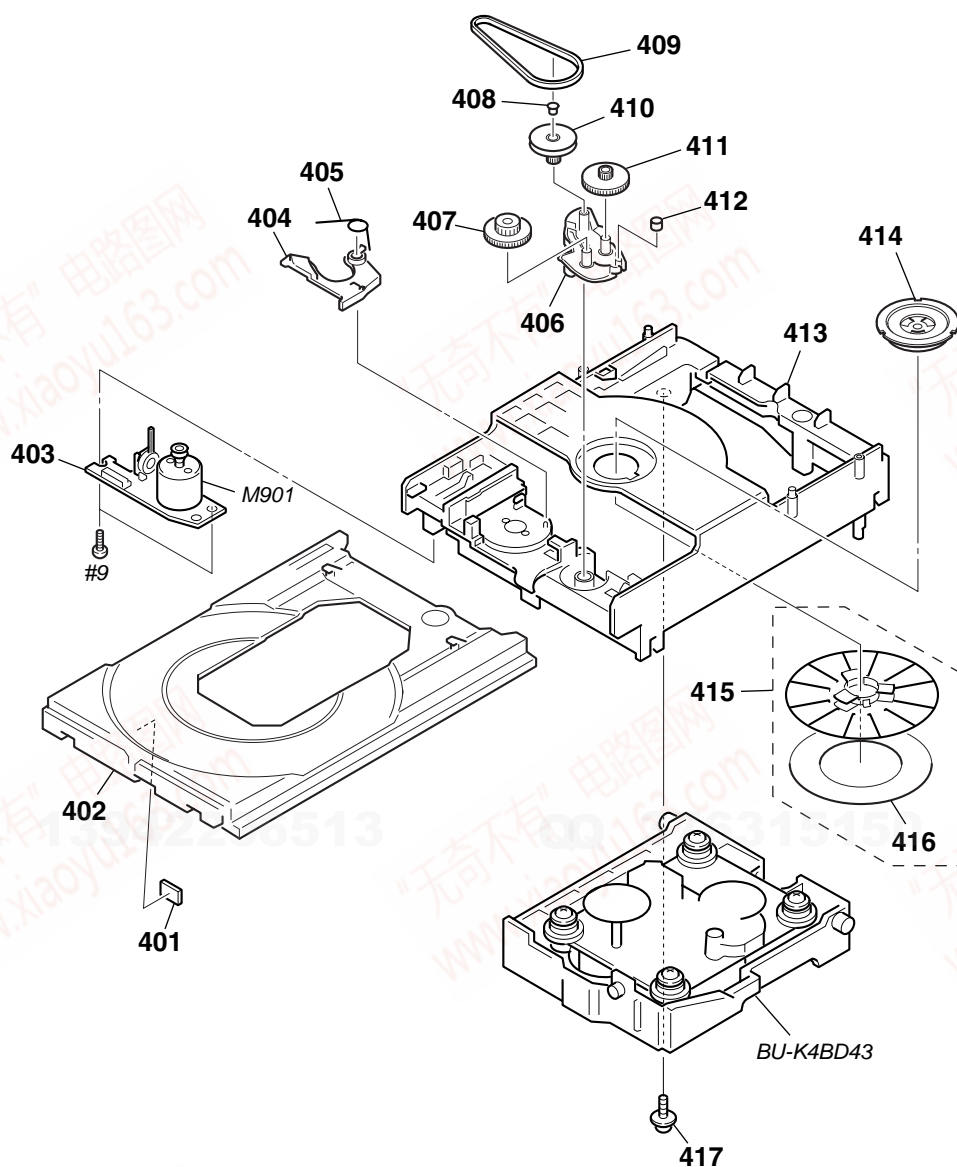


Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
202	4-232-478-01	FOOT		208	A-4726-246-A	MAIN BOARD, COMPLETE (AEP, UK)	
203	A-4725-836-A	POWER BOARD, COMPLETE (AEP, UK)		208	A-4726-247-A	MAIN BOARD, COMPLETE (TW)	
203	A-4725-850-A	POWER BOARD, COMPLETE (HK, SP, TW)		208	A-4726-248-A	MAIN BOARD, COMPLETE (HK, SP)	
204	1-682-097-11	OPTICAL BOARD		209	1-682-098-11	OPTICAL RETAINER BOARD	
205	4-234-568-01	PANEL, BACK (AEP, UK)		△ T902	1-437-248-21	TRANSFORMER, POWER (AEP, UK)	
205	4-234-568-31	PANEL, BACK (TW)		△ T902	1-437-250-11	TRANSFORMER, POWER (HK, SP, TW)	
205	4-234-568-41	PANEL, BACK (HK, SP)		TU1	A-4476-414-A	TUNER UNIT (AEP, UK)	
206	4-217-350-11	STOPPER, CORD		TU1	A-4476-416-A	TUNER UNIT (HK, SP, TW)	
△ 207	1-696-169-11	CORD, POWER					

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

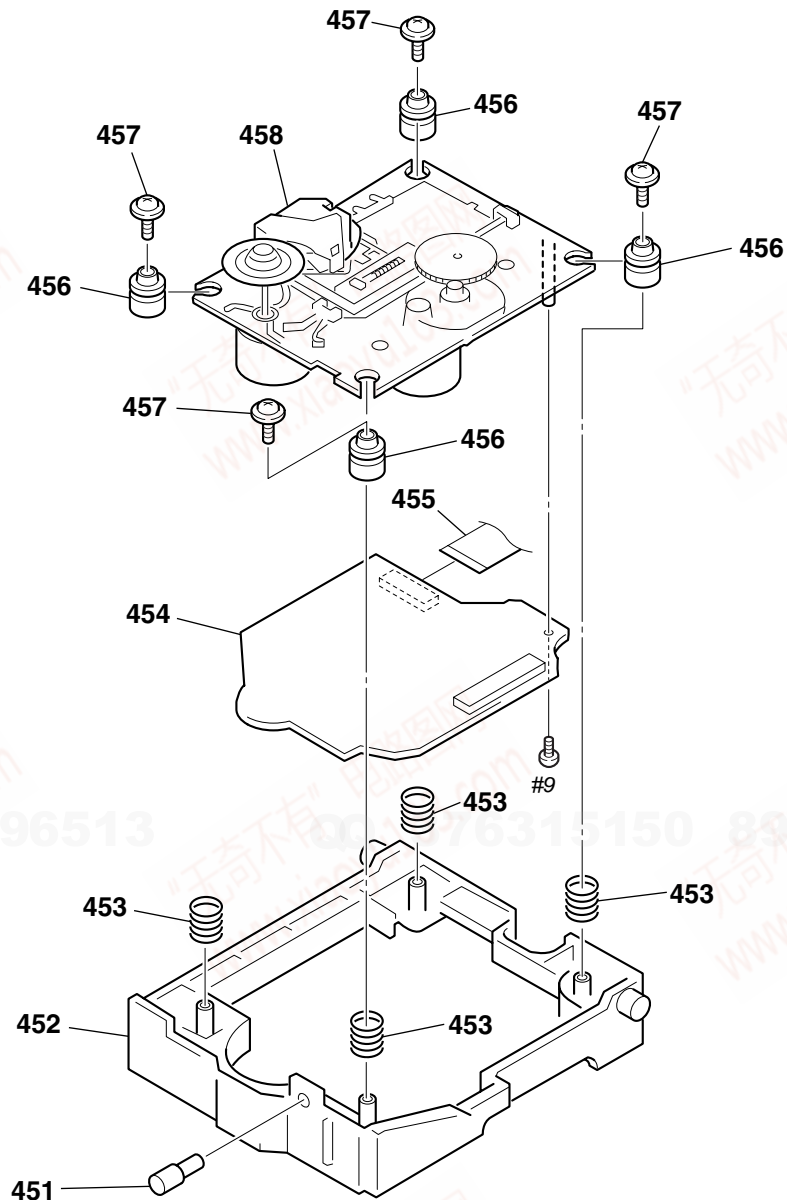
# HCD-J300

## 8-6. CD MECHANISM DECK-1 (CDM55F-K4BD43)



Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
401	4-925-315-31	DAMPER		411	4-220-237-01	GEAR (A)	
402	4-224-894-01	TRAY		412	4-221-815-01	ROLLER	
403	1-676-599-11	LOADING BOARD		413	4-231-779-01	CHASSIS (F)	
404	4-220-229-01	LEVER (SW)		414	A-4735-082-A	MAGNET ASSY	
405	4-220-239-01	SPRING, TORSION		415	A-4735-081-A	PULLEY (AT-55F) ASSY	
406	4-220-233-01	CAM (CDM55)		416	4-232-398-01	SHEET (KH)	
407	4-220-238-01	GEAR (B)		417	4-985-672-01	SCREW (+PTPWHM2.6), FLOATING	
408	4-227-598-01	SPACER (55)		M901	A-2004-893-A	MOTOR (LD) ASSY	
409	4-221-816-01	BELT (CDM55)					
410	4-220-234-01	PULLEY (LDG)					

## 8-7. CD MECHANISM DECK-2 (BU-K4BD43)



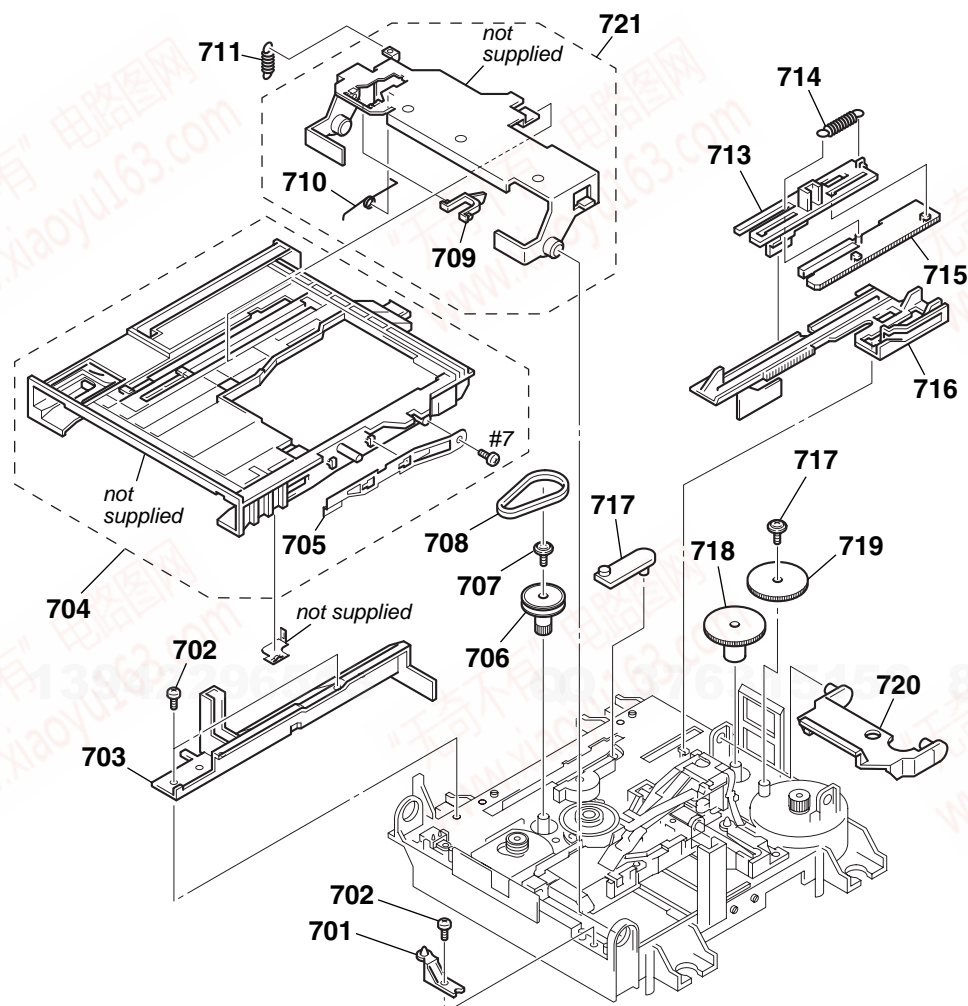
Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
451	4-221-817-02	SHAFT (BU)		456	4-229-005-01	INSULATOR	
452	4-231-780-01	HOLDER (213D)		457	4-985-672-01	SCREW (+PTPWHM2.6), FLOATING	
453	4-229-004-01	SPRING, COMPRESSION		△ 458	A-4735-357-A	BASE ASSY, DP (KSM-213DHAP/Z-NP)	
454	A-4476-973-A	CD BOARD, COMPLETE					
455	1-823-145-11	WIRE, PARALLEL (FFC) (16 CORE)					

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.



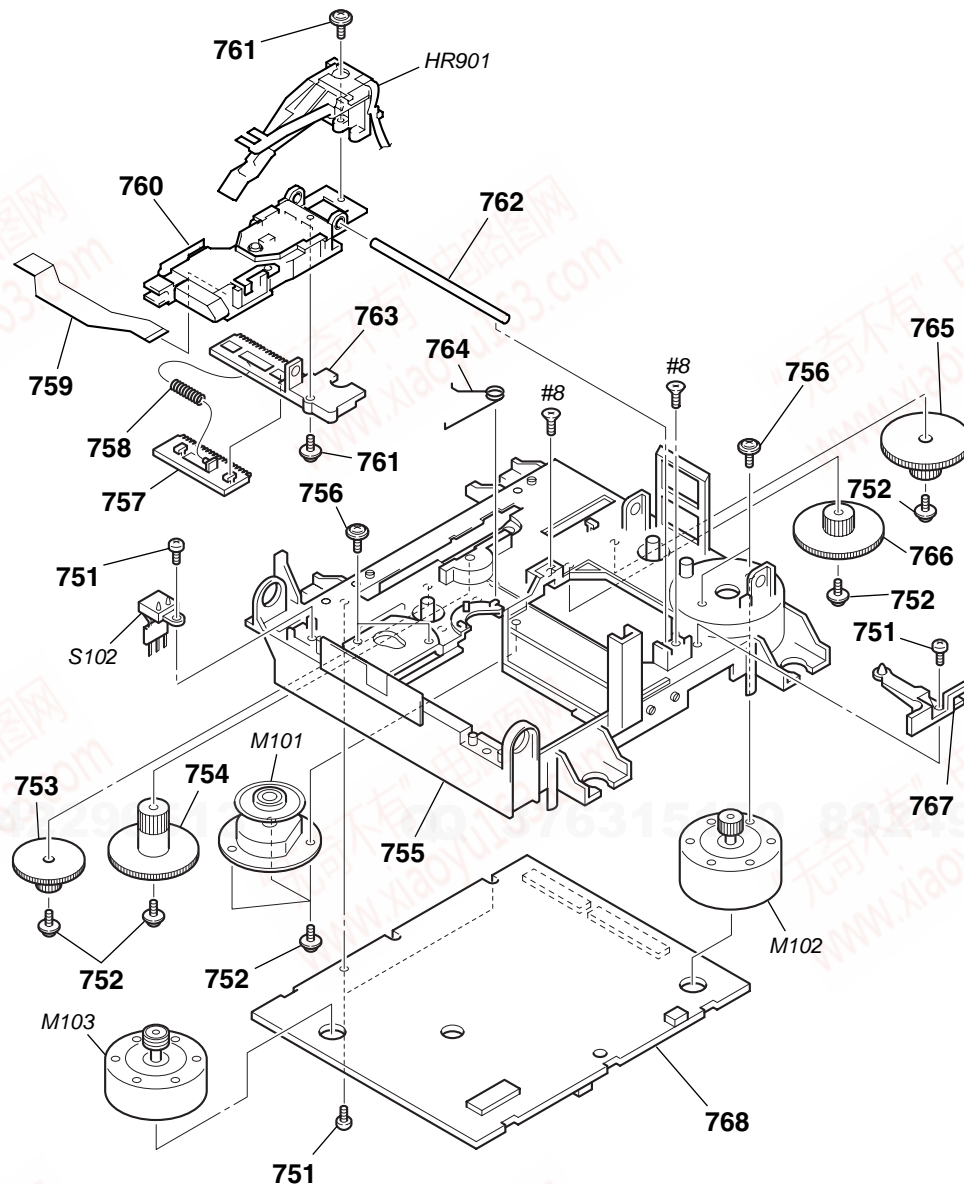
# HCD-J300

## 8-8. MD MECHANISM DECK-1 (MDM-7B)



Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
* 701	4-996-267-01	BASE (BU-D)		711	4-227-012-01	SPRING (HOLDER), TENSION	
702	4-231-319-01	SCREW (2X6) CZN, +B (P) TRI		713	4-226-995-01	SLIDER (EJ)	
703	4-226-994-01	GUIDE (L)		714	4-227-013-01	SPRING (EJ), TENSION	
704	A-4735-075-A	HOLDER ASSY		715	4-226-996-01	LIMITTER (EJ)	
705	X-4952-665-1	SPRING (SHT) ASSY, LEAF		716	4-226-997-04	SLIDER	
706	4-227-002-01	GEAR, PULLEY		717	4-226-998-01	LEVER (CHG)	
707	3-372-761-01	SCREW (M1.7), TAPPING		718	4-227-007-01	GEAR (SB)	
708	4-227-025-01	BELT (LOADING)		719	4-227-006-01	GEAR (SA)	
709	4-228-923-04	LOCK (HOLDER)		720	4-226-999-01	LEVER (HEAD)	
710	4-229-533-01	SPRING (STOPPER), TORSION		721	A-4680-638-B	RETAINER COMPLETE ASSY	

# 8-9. MD MECHANISM DECK-2 (MDM-7B)



Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
751	4-231-319-01	SCREW (2X6) CZN, +B (P) TRI		763	4-226-992-01	BASE, SL	
752	3-372-761-01	SCREW (M1.7), TAPPING		764	4-227-023-01	SPRING (SPINDLE), TORSION	
753	4-227-008-01	GEAR (SC)		765	4-227-004-01	GEAR (LC)	
754	4-227-009-01	GEAR (SD)		766	4-227-005-01	GEAR (LD)	
755	4-226-989-01	CHASSIS		767	4-226-990-01	BASE (BU-A)	
756	4-232-270-01	SCREW (1.7X3.5), +PWH		768	A-4725-473-A	BD BOARD, COMPLETE	
757	4-226-993-01	RACK		HR901	1-500-670-11	HEAD, OVER LIGHT	
758	4-227-014-01	SPRING (RACK), COMPRESSION		M101	A-4672-898-A	MOTOR ASSY, SPINDLE	
759	1-678-514-11	PWB, FLEXIBLE		M102	A-4735-076-A	MOTOR ASSY, SLED	
△ 760	A-4672-541-A	OPTICAL PICK-UP (KMS-260)		M103	A-4735-074-A	MOTOR ASSY, LOADING	
761	4-988-560-01	SCREW (+P 1.7X6)		S102	1-771-957-11	SWITCH, PUSH (2 KEY) (REFRECT/PROTECT)	
762	4-996-265-01	SHAFT, MAIN					

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

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BD

## SECTION 9 ELECTRICAL PARTS LIST

### NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- RESISTORS**  
All resistors are in ohms.  
METAL: metal-film resistor  
METAL OXIDE: Metal Oxide-film resistor  
F: nonflammable

- CAPACITORS:**  
uF:  $\mu$ F  
uH:  $\mu$ H
- COILS**
- SEMICONDUCTORS**  
In each case, u:  $\mu$ , for example:  
uA...,  $\mu$ A..., uPA...,  $\mu$ PA...,  
uPB...,  $\mu$ PB..., uPC...,  $\mu$ PC...,  
uPD...,  $\mu$ PD...
- Abbreviation**  
HK : Hong Kong model  
SP : Singapore model  
TW : Taiwan model

When indicating parts by reference number, please include the board name.

The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
	A-4725-473-A	BD BOARD, COMPLETE *****		C158	1-162-927-11	CERAMIC CHIP 100PF 5%	50V
		< CAPACITOR >		C159	1-162-927-11	CERAMIC CHIP 100PF 5%	50V
C101	1-135-259-11	TANTAL. CHIP 10uF 20%	6.3V	C160	1-162-927-11	CERAMIC CHIP 100PF 5%	50V
C102	1-135-259-11	TANTAL. CHIP 10uF 20%	6.3V	C161	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
C103	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V	C162	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
C104	1-164-227-11	CERAMIC CHIP 0.022uF 10%	25V				
C105	1-115-416-11	CERAMIC CHIP 0.001uF 5%	25V	C163	1-125-891-11	CERAMIC CHIP 0.47uF 10%	10V
				C164	1-162-927-11	CERAMIC CHIP 100PF 5%	50V
C106	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V	C165	1-162-968-11	CERAMIC CHIP 0.0047uF 10%	50V
C107	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V	C166	1-125-891-11	CERAMIC CHIP 0.47uF 10%	10V
C108	1-162-969-11	CERAMIC CHIP 0.0068uF 10%	25V	C167	1-164-245-11	CERAMIC CHIP 0.015uF 10%	25V
C109	1-164-677-11	CERAMIC CHIP 0.033uF 10%	16V				
C110	1-163-038-00	CERAMIC CHIP 0.1uF	25V	C169	1-164-156-11	CERAMIC CHIP 0.1uF	25V
				C173	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C111	1-117-720-11	CERAMIC CHIP 4.7uF	10V	C174	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
C112	1-110-563-11	CERAMIC CHIP 0.068uF 10%	16V	C180	1-117-370-11	CERAMIC CHIP 10uF	10V
C113	1-162-968-11	CERAMIC CHIP 0.0047uF 10%	50V	C181	1-126-206-11	ELECT CHIP 100uF 20%	6.3V
C114	1-125-837-11	CERAMIC CHIP 1uF 10%	6.3V				
C115	1-162-966-11	CERAMIC CHIP 0.0022uF 10%	50V	C182	1-163-038-00	CERAMIC CHIP 0.1uF	25V
				C183	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C116	1-164-227-11	CERAMIC CHIP 0.022uF 10%	25V	C184	1-117-970-11	ELECT CHIP 22uF 20%	10V
C117	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V	C185	1-131-872-11	CERAMIC CHIP 1000PF 10%	630V
C118	1-165-176-11	CERAMIC CHIP 0.047uF 10%	16V	C191	1-126-206-11	ELECT CHIP 100uF 20%	6.3V
C119	1-165-176-11	CERAMIC CHIP 0.047uF 10%	16V				
C120	1-164-156-11	CERAMIC CHIP 0.1uF	25V	C192	1-164-156-11	CERAMIC CHIP 0.1uF	25V
				C193	1-126-206-11	ELECT CHIP 100uF 20%	6.3V
C121	1-164-156-11	CERAMIC CHIP 0.1uF	25V	C194	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C125	1-117-720-11	CERAMIC CHIP 4.7uF	10V	C195	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C128	1-164-156-11	CERAMIC CHIP 0.1uF	25V	C196	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C131	1-117-720-11	CERAMIC CHIP 4.7uF	10V				
C132	1-164-156-11	CERAMIC CHIP 0.1uF	25V	C1401	1-117-720-11	CERAMIC CHIP 4.7uF	10V
						< CONNECTOR >	
C133	1-164-156-11	CERAMIC CHIP 0.1uF	25V	CN101	1-766-833-21	CONNECTOR, FFC/FPC (ZIF) 21P	
C141	1-126-206-11	ELECT CHIP 100uF 20%	6.3V	CN102	1-784-835-21	CONNECTOR, FFC(LIF(NON-ZIF))27P	
C142	1-164-156-11	CERAMIC CHIP 0.1uF	25V	CN103	1-784-869-21	CONNECTOR, FFC(LIF(NON-ZIF))17P	
C143	1-164-156-11	CERAMIC CHIP 0.1uF	25V	* CN104	1-580-055-21	PIN, CONNECTOR (SMD) 2P	
C144	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V	CN105	1-784-859-21	CONNECTOR, FFC(LIF(NON-ZIF))7P	
						< DIODE >	
C145	1-164-156-11	CERAMIC CHIP 0.1uF	25V	D101	8-719-988-61	DIODE 1SS355TE-17	
C146	1-117-720-11	CERAMIC CHIP 47uF	10V	D181	8-719-080-81	DIODE FS1J6	
C147	1-117-720-11	CERAMIC CHIP 47uF	10V	D183	8-719-080-81	DIODE FS1J6	
C151	1-117-370-11	CERAMIC CHIP 10uF	10V			< IC >	
C152	1-164-156-11	CERAMIC CHIP 0.1uF	25V				
				IC101	8-752-080-95	IC CXA2523AR	
C153	1-164-156-11	CERAMIC CHIP 0.1uF	25V	IC102	8-759-473-51	IC TLV2361CDBV	
C154	1-126-206-11	ELECT CHIP 100uF 20%	6.3V	IC141	8-759-836-79	IC BH6519FS-E2	
C155	1-164-156-11	CERAMIC CHIP 0.1uF	25V	IC151	8-752-404-64	IC CXD2662R	
C156	1-164-156-11	CERAMIC CHIP 0.1uF	25V	IC152	6-700-052-01	IC MSM51V17400F-50TS-K	
C157	1-164-156-11	CERAMIC CHIP 0.1uF	25V				

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
IC181	8-759-481-17	IC MC74ACT08DTR2		R111	1-216-833-11	METAL CHIP 10K 5%	1/16W
IC190	8-759-677-64	IC L88M35T		R112	1-216-829-11	METAL CHIP 4.7K 5%	1/16W
IC195	8-759-640-41	IC BR24C08F-E2		R113	1-216-833-11	METAL CHIP 10K 5%	1/16W
< JUMPER RESISTOR >				R114	1-216-827-11	METAL CHIP 3.3K 5%	1/16W
JW201	1-216-295-00	SHORT 0		R115	1-216-833-11	METAL CHIP 10K 5%	1/16W
JW202	1-216-295-00	SHORT 0		R116	1-216-839-11	METAL CHIP 33K 5%	1/16W
JW203	1-216-295-00	SHORT 0		R117	1-216-837-11	METAL CHIP 22K 5%	1/16W
JW903	1-216-295-00	SHORT 0		R118	1-218-855-11	METAL CHIP 2.2K 0.5%	1/16W
JW904	1-216-295-00	SHORT 0		R119	1-218-863-11	METAL CHIP 4.7K 0.5%	1/16W
< COIL >				R120	1-218-889-11	METAL CHIP 56K 0.5%	1/16W
L101	1-500-245-11	FERRITE 0uH		R121	1-218-863-11	METAL CHIP 4.7K 0.5%	1/16W
L102	1-500-245-11	FERRITE 0uH		R122	1-218-855-11	METAL CHIP 2.2K 0.5%	1/16W
L103	1-500-245-11	FERRITE 0uH		R123	1-216-819-11	METAL CHIP 680 5%	1/16W
L105	1-414-235-11	FERRITE 0uH		R124	1-216-809-11	METAL CHIP 100 5%	1/16W
L106	1-500-245-11	FERRITE 0uH		R125	1-216-815-11	METAL CHIP 330 5%	1/16W
L121	1-500-245-11	FERRITE 0uH		R126	1-216-819-11	METAL CHIP 680 5%	1/16W
L122	1-500-245-11	FERRITE 0uH		R127	1-216-845-11	METAL CHIP 100K 5%	1/16W
L131	1-500-245-11	FERRITE 0uH		R128	1-219-724-11	METAL CHIP 1 1%	1/4W
L141	1-216-296-11	SHORT 0		R129	1-216-298-00	METAL CHIP 2.2 5%	1/10W
L142	1-216-296-11	SHORT 0		R130	1-216-829-11	METAL CHIP 4.7K 5%	1/16W
L143	1-216-296-11	SHORT 0		R131	1-216-833-11	METAL CHIP 10K 5%	1/16W
L144	1-216-296-11	SHORT 0		R132	1-216-839-11	METAL CHIP 33K 5%	1/16W
L145	1-216-296-11	SHORT 0		R133	1-216-821-11	METAL CHIP 1K 5%	1/16W
L146	1-469-855-21	FERRITE 0uH		R134	1-216-821-11	METAL CHIP 1K 5%	1/16W
L147	1-469-855-21	FERRITE 0uH		R135	1-216-821-11	METAL CHIP 1K 5%	1/16W
L161	1-500-245-11	FERRITE 0uH		R136	1-216-302-00	METAL CHIP 2.7 5%	1/10W
L171	1-500-245-11	FERRITE 0uH		R138	1-216-833-11	METAL CHIP 10K 5%	1/16W
L180	1-469-855-21	FERRITE 0uH		R150	1-216-833-11	METAL CHIP 10K 5%	1/16W
L181	1-469-855-21	FERRITE 0uH		R151	1-216-833-11	METAL CHIP 10K 5%	1/16W
L182	1-500-245-11	FERRITE 0uH		R153	1-216-833-11	METAL CHIP 10K 5%	1/16W
L183	1-216-296-11	SHORT 0		R155	1-216-864-11	METAL CHIP 0 5%	1/16W
L184	1-216-296-11	SHORT 0		R156	1-216-864-11	METAL CHIP 0 5%	1/16W
< TRANSISTOR >				R158	1-216-809-11	METAL CHIP 100 5%	1/16W
Q101	8-729-403-35	TRANSISTOR UN5113-TX		R162	1-216-833-11	METAL CHIP 10K 5%	1/16W
Q121	8-729-403-35	TRANSISTOR UN5113-TX		R167	1-216-833-11	METAL CHIP 10K 5%	1/16W
Q122	8-729-101-07	TRANSISTOR 2SB798-T1DK		R168	1-216-845-11	METAL CHIP 100K 5%	1/16W
Q131	8-729-026-53	TRANSISTOR 2SA1576A-T106-QR		R169	1-216-855-11	METAL CHIP 680K 5%	1/16W
Q132	8-729-903-10	TRANSISTOR FMW1-T-148		R170	1-216-827-11	METAL CHIP 3.3K 5%	1/16W
Q133	8-729-402-93	TRANSISTOR UN5214-TX		R171	1-216-821-11	METAL CHIP 1K 5%	1/16W
Q134	8-729-402-93	TRANSISTOR UN5214-TX		R173	1-216-821-11	METAL CHIP 1K 5%	1/16W
Q181	8-729-018-75	TRANSISTOR 2SJ278MYTR		R174	1-216-811-11	METAL CHIP 150 5%	1/16W
Q182	8-729-017-65	TRANSISTOR 2SK1764KYTR		R177	1-216-805-11	METAL CHIP 47 5%	1/16W
< RESISTOR >				R179	1-216-295-00	SHORT 0	
R101	1-216-829-11	METAL CHIP 4.7K 5%	1/16W	R181	1-216-841-11	METAL CHIP 47K 5%	1/16W
R102	1-216-853-11	METAL CHIP 470K 5%	1/16W	R182	1-216-841-11	METAL CHIP 47K 5%	1/16W
R103	1-216-863-11	RES-CHIP 3.3M 5%	1/16W	R183	1-216-841-11	METAL CHIP 47K 5%	1/16W
R104	1-216-853-11	METAL CHIP 470K 5%	1/16W	R184	1-220-942-11	METAL CHIP 3.3 1%	1/4
R105	1-216-825-11	METAL CHIP 2.2K 5%	1/16W	R185	1-220-942-11	METAL CHIP 3.3 1%	1/4
R106	1-216-825-11	METAL CHIP 2.2K 5%	1/16W	R195	1-216-833-11	METAL CHIP 10K 5%	1/16W
R107	1-216-825-11	METAL CHIP 2.2K 5%	1/16W	R196	1-216-833-11	METAL CHIP 10K 5%	1/16W
R108	1-216-833-11	METAL CHIP 10K 5%	1/16W	R197	1-216-833-11	METAL CHIP 10K 5%	1/16W
R109	1-216-845-11	METAL CHIP 100K 5%	1/16W	R218	1-216-864-11	METAL CHIP 0 5%	1/16W
R110	1-216-845-11	METAL CHIP 100K 5%	1/16W	< SWITCH >			
				S101	1-762-596-21	SWITCH, PUSH (1 KEY) (LIMIT IN)	
				S103	1-771-956-21	SWITCH, PUSH (1 KEY) (OUT)	
				S104	1-771-955-21	SWITCH, PUSH (1 KEY) (PLAY)	
				S105	1-771-955-21	SWITCH, PUSH (1 KEY) (REC)	



# HCD-J300



Ref. No.	Part No.	Description	Remarks		
< VIBRATOR >					
X171	1-781-569-21	OSCILLATOR, CRYSTAL (90MHz)			
*****					
A-4476-973-A		CD BOARD, COMPLETE	*****		
< CAPACITOR >					
C101	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C102	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C103	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C104	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V
C107	1-162-921-11	CERAMIC CHIP	33PF	5%	50V
C108	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C109	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C110	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C111	1-126-204-11	ELECT CHIP	47uF	20%	16V
C112	1-126-204-11	ELECT CHIP	47uF	20%	16V
C113	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C114	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C115	1-126-204-11	ELECT CHIP	47uF	20%	16V
C117	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C118	1-115-156-11	CERAMIC CHIP	1uF		10V
C119	1-115-156-11	CERAMIC CHIP	1uF		10V
C120	1-126-204-11	ELECT CHIP	47uF	20%	16V
C121	1-107-825-11	CERAMIC CHIP	0.1uF	10%	16V
C151	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C162	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C201	1-126-204-11	ELECT CHIP	47uF	20%	16V
C202	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C203	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C204	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C205	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C209	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C211	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C212	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C213	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V
C215	1-117-863-11	CERAMIC CHIP	0.47uF	10%	6.3V
C216	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C217	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C221	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C222	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C224	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C227	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C228	1-115-156-11	CERAMIC CHIP	1uF		10V
C229	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C230	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C231	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C234	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C235	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C236	1-117-863-11	CERAMIC CHIP	0.47uF	10%	6.3V
C237	1-115-412-11	CERAMIC CHIP	680PF	5%	25V
C238	1-115-412-11	CERAMIC CHIP	680PF	5%	25V
C239	1-115-412-11	CERAMIC CHIP	680PF	5%	25V
C240	1-115-412-11	CERAMIC CHIP	680PF	5%	25V
C241	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C242	1-126-204-11	ELECT CHIP	47uF	20%	16V
C243	1-164-360-11	CERAMIC CHIP	0.1uF		16V

Ref. No.	Part No.	Description	Remarks
C244	1-164-360-11	CERAMIC CHIP 0.1uF	16V
C245	1-126-204-11	ELECT CHIP 47uF 20%	16V
C247	1-164-227-11	CERAMIC CHIP 0.022uF 10%	25V
C248	1-164-227-11	CERAMIC CHIP 0.022uF 10%	25V
C249	1-164-360-11	CERAMIC CHIP 0.1uF	16V
< CONNECTOR >			
CN101	1-784-873-21	CONNECTOR, FFC(LIF(NON-ZIF))22P	
CN102	1-794-424-11	CONNECTOR, FCC/FPC 16P	
< DIODE >			
D101	8-719-056-77	DIODE UDZ-TE-17-3.9B	
< FERRITE BEAD >			
FB101	1-500-445-21	FERRITE 0uH	
< IC >			
IC101	8-752-408-73	IC CXD3068Q	
IC103	8-752-089-73	IC CXA2581N	
IC702	8-759-640-22	IC BA5982FM	
< FERRITE BEAD >			
L107	1-500-445-21	FERRITE 0uH	
< TRANSISTOR >			
Q101	8-729-049-31	TRANSISTOR 2SB710A-RTX	
Q102	8-759-068-54	TRANSISTOR KRA102S	
Q103	8-729-920-85	TRANSISTOR 2SD1664-T100-QR	
< RESISTOR >			
R102	1-216-835-11	METAL CHIP 15K 5%	1/16W
R103	1-216-845-11	METAL CHIP 100K 5%	1/16W
R104	1-216-835-11	METAL CHIP 15K 5%	1/16W
R105	1-216-821-11	METAL CHIP 1K 5%	1/16W
R109	1-216-846-11	METAL CHIP 120K 5%	1/16W
R111	1-216-846-11	METAL CHIP 120K 5%	1/16W
R113	1-216-826-11	METAL CHIP 2.7K 5%	1/16W
R114	1-216-745-11	RES-CHIP 160K 5%	1/16W
R115	1-216-836-11	METAL CHIP 18K 5%	1/16W
R118	1-216-833-11	METAL CHIP 10K 5%	1/16W
R120	1-216-846-11	METAL CHIP 120K 5%	1/16W
R122	1-216-845-11	METAL CHIP 100K 5%	1/16W
R123	1-216-797-11	METAL CHIP 10 5%	1/16W
R124	1-216-798-11	RES-CHIP 12 5%	1/16W
R125	1-216-836-11	METAL CHIP 18K 5%	1/16W
R126	1-216-836-11	METAL CHIP 18K 5%	1/16W
R127	1-216-845-11	METAL CHIP 100K 5%	1/16W
R151	1-216-845-11	METAL CHIP 100K 5%	1/16W
R152	1-216-833-11	METAL CHIP 10K 5%	1/16W
R201	1-216-839-11	METAL CHIP 33K 5%	1/16W
R202	1-216-833-11	METAL CHIP 10K 5%	1/16W
R203	1-216-845-11	METAL CHIP 100K 5%	1/16W
R204	1-216-827-11	METAL CHIP 3.3K 5%	1/16W
R205	1-216-821-11	METAL CHIP 1K 5%	1/16W
R206	1-216-833-11	METAL CHIP 10K 5%	1/16W
R207	1-216-857-11	METAL CHIP 1M 5%	1/16W
R212	1-216-813-11	METAL CHIP 220 5%	1/16W
R213	1-216-864-11	METAL CHIP 0 5%	1/16W
R214	1-216-864-11	METAL CHIP 0 5%	1/16W
R215	1-216-864-11	METAL CHIP 0 5%	1/16W
R216	1-216-813-11	METAL CHIP 220 5%	1/16W

CD

CONTROL

Ref. No.	Part No.	Description			Remarks
R217	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R218	1-216-821-11	METAL CHIP	1K	5%	1/16W
R219	1-216-821-11	METAL CHIP	1K	5%	1/16W
R221	1-216-813-11	METAL CHIP	220	5%	1/16W
R226	1-216-809-11	METAL CHIP	100	5%	1/16W
R227	1-216-845-11	METAL CHIP	100K	5%	1/16W
R228	1-216-853-11	METAL CHIP	470K	5%	1/16W
R229	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R230	1-216-789-11	METAL CHIP	2.2	5%	1/16W
R240	1-216-837-11	METAL CHIP	22K	5%	1/16W
R241	1-216-837-11	METAL CHIP	22K	5%	1/16W
R242	1-216-837-11	METAL CHIP	22K	5%	1/16W
R243	1-216-837-11	METAL CHIP	22K	5%	1/16W
R244	1-218-344-11	RES-CHIP	7.5K	5%	1/16W
R245	1-218-344-11	RES-CHIP	7.5K	5%	1/16W
R246	1-218-344-11	RES-CHIP	7.5K	5%	1/16W
R247	1-218-344-11	RES-CHIP	7.5K	5%	1/16W
R248	1-218-332-11	RES-CHIP	130K	5%	1/16W
R249	1-216-845-11	METAL CHIP	100K	5%	1/16W
R250	1-218-344-11	RES-CHIP	7.5K	5%	1/16W
R251	1-216-847-11	METAL CHIP	150K	5%	1/16W
R252	1-218-344-11	RES-CHIP	7.5K	5%	1/16W
R253	1-216-837-11	METAL CHIP	22K	5%	1/16W
R254	1-216-837-11	METAL CHIP	22K	5%	1/16W
< NETWORK >					
RN201	1-233-576-11	RES, CHIP NETWORK 100			
RN202	1-233-576-11	RES, CHIP NETWORK 100			
< VARIABLE RESISTOR >					
RV101	1-223-277-21	RES, CARBON ADJ VAR 47K			
< SWITCH >					
S101	1-771-853-11	SWITCH, DETECTION (LIMIT IN)			
< VIBRATOR >					
X101	1-767-518-11	VIBRATOR, CRYSTAL (33.8688MHz)			
*****					
A-4726-242-A	CONTROL BOARD, COMPLETE				
*****					
	1-823-147-11	LEAD (WITH CONNECTOR)			
	4-235-201-01	LCD HOLDER (F)			
	4-235-323-01	SHEET, LCD			
< CAPACITOR >					
C841	1-124-259-11	ELECT	4.7uF	20%	16V
C842	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C843	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C844	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
< CONNECTOR >					
CN801	1-784-747-11	CONNECTOR, FFC 25P			
< DIODE >					
D811	8-719-074-42	DIODE SLR325VR-T31 (●MD)			
D812	8-719-074-42	DIODE SLR325VR-T31 (●TAPE)			
D814	8-719-074-42	DIODE SLR325VR-T31 (I/⏻)			
D822	8-719-050-06	DIODE SLR-325MGT31 (TAPE◀▶)			
D823	8-719-050-06	DIODE SLR-325MGT31 (MD▶▶▶)			

Ref. No.	Part No.	Description	Remarks
D824	8-719-050-06	DIODE SLR-325MGT31 (CD)	
D825	8-719-050-06	DIODE SLR-325MGT31 (TUNER, BAND)	
< IC >			
IC801	8-759-827-68	IC NJL62H400A-1 (R)	
< CONDUCTOR >			
JR801	1-216-864-11	METAL CHIP 0	5% 1/16W
JR805	1-216-864-11	METAL CHIP 0	5% 1/16W
< COIL >			
L301	1-412-006-31	INDUCTOR 10uH	
L302	1-412-006-31	INDUCTOR 10uH	
< LIQUID CRYSTAL DISPLAY >			
LCD801	1-804-393-11	DISPLAY PANEL, LIQUID CRYSTAL	
< TRANSISTOR >			
Q801	8-729-900-53	TRANSISTOR DTC114EKA-T146	
Q802	8-729-900-53	TRANSISTOR DTC114EKA-T146	
Q803	8-729-900-53	TRANSISTOR DTC114EKA-T146	
Q804	8-729-900-53	TRANSISTOR DTC114EKA-T146	
Q805	8-729-900-53	TRANSISTOR DTC114EKA-T146	
Q806	8-729-900-53	TRANSISTOR DTC114EKA-T146	
Q807	8-729-900-53	TRANSISTOR DTC114EKA-T146	
Q808	8-729-900-53	TRANSISTOR DTC114EKA-T146	
< RESISTOR >			
R801	1-216-819-11	METAL CHIP 680	5% 1/16W
R802	1-216-820-11	METAL CHIP 820	5% 1/16W
R803	1-216-822-11	METAL CHIP 1.2K	5% 1/16W
R804	1-216-824-11	METAL CHIP 1.8K	5% 1/16W
R808	1-216-819-11	METAL CHIP 680	5% 1/16W
R809	1-216-820-11	METAL CHIP 820	5% 1/16W
R810	1-216-822-11	METAL CHIP 1.2K	5% 1/16W
R811	1-216-824-11	METAL CHIP 1.8K	5% 1/16W
R815	1-216-819-11	METAL CHIP 680	5% 1/16W
R816	1-216-820-11	METAL CHIP 820	5% 1/16W
R817	1-216-822-11	METAL CHIP 1.2K	5% 1/16W
R818	1-216-824-11	METAL CHIP 1.8K	5% 1/16W
R819	1-216-827-11	METAL CHIP 3.3K	5% 1/16W
R820	1-216-831-11	METAL CHIP 6.8K	5% 1/16W
R821	1-216-836-11	METAL CHIP 18K	5% 1/16W
R822	1-216-819-11	METAL CHIP 680	5% 1/16W
R823	1-216-820-11	METAL CHIP 820	5% 1/16W
R824	1-216-822-11	METAL CHIP 1.2K	5% 1/16W
R825	1-216-824-11	METAL CHIP 1.8K	5% 1/16W
R826	1-216-827-11	METAL CHIP 3.3K	5% 1/16W
R827	1-216-831-11	METAL CHIP 6.8K	5% 1/16W
R828	1-216-836-11	METAL CHIP 18K	5% 1/16W
R829	1-216-833-11	METAL CHIP 10K	5% 1/16W
R833	1-216-829-11	METAL CHIP 4.7K	5% 1/16W
R834	1-216-829-11	METAL CHIP 4.7K	5% 1/16W
R835	1-216-829-11	METAL CHIP 4.7K	5% 1/16W
R836	1-216-829-11	METAL CHIP 4.7K	5% 1/16W
R837	1-216-829-11	METAL CHIP 4.7K	5% 1/16W
R841	1-216-809-11	METAL CHIP 100	5% 1/16W
R842	1-216-845-11	METAL CHIP 100K	5% 1/16W

## HCD-J300

## CONTROL

## DIGITAL

Ref. No.	Part No.	Description	Remarks
R843	1-216-845-11	METAL CHIP 100K 5%	1/16W
R852	1-216-822-11	METAL CHIP 1.2K 5%	1/16W
R853	1-216-822-11	METAL CHIP 1.2K 5%	1/16W
R861	1-216-844-11	METAL CHIP 82K 5%	1/16W
R862	1-216-829-11	METAL CHIP 4.7K 5%	1/16W
R863	1-216-820-11	METAL CHIP 820 5%	1/16W
R866	1-216-819-11	METAL CHIP 680 5%	1/16W
R867	1-216-819-11	METAL CHIP 680 5%	1/16W
< VARIABLE RESISTOR >			
RV801	1-473-392-11	ENCODER, ROTARY (VOLUME)	
< SWITCH >			
S801	1-786-220-11	SWITCH, KEY BOARD (TUNER, BAND)	
S802	1-786-220-11	SWITCH, KEY BOARD (TUNING -)	
S803	1-786-220-11	SWITCH, KEY BOARD (TUNING +)	
S804	1-786-220-11	SWITCH, KEY BOARD (TUNER MODE, PLAY MODE/DIRECTION)	
S805	1-786-220-11	SWITCH, KEY BOARD (REPEAT, STEREO/MONO)	
S809	1-786-220-11	SWITCH, KEY BOARD (TAPE◀▶)	
S810	1-786-220-11	SWITCH, KEY BOARD (■(TAPE))	
S811	1-786-220-11	SWITCH, KEY BOARD (◀◀(TAPE))	
S812	1-786-220-11	SWITCH, KEY BOARD (▶▶(TAPE))	
S813	1-786-220-11	SWITCH, KEY BOARD (■(TAPE))	
S817	1-786-220-11	SWITCH, KEY BOARD (MD▶▶■)	
S818	1-786-220-11	SWITCH, KEY BOARD (■(MD))	
S819	1-786-220-11	SWITCH, KEY BOARD (◀◀■(MD))	
S820	1-786-220-11	SWITCH, KEY BOARD (▶▶■(MD))	
S821	1-786-220-11	SWITCH, KEY BOARD (CD▶▶■)	
S822	1-786-220-11	SWITCH, KEY BOARD (■(CD))	
S823	1-786-220-11	SWITCH, KEY BOARD (◀◀■(CD))	
S824	1-786-220-11	SWITCH, KEY BOARD (▶▶■(CD))	
S825	1-786-220-11	SWITCH, KEY BOARD (SYNCHRO REC)	
S826	1-786-220-11	SWITCH, KEY BOARD (ENTER/START)	
S827	1-786-220-11	SWITCH, KEY BOARD (REC MODE)	
S828	1-571-760-11	SWITCH, KEY BOARD (●(MD))	
S829	1-571-760-11	SWITCH, KEY BOARD (●(TAPE))	
S830	1-786-220-11	SWITCH, KEY BOARD (FUNCTION)	
S831	1-786-220-11	SWITCH, KEY BOARD (MD▲)	
S832	1-786-220-11	SWITCH, KEY BOARD (CD▲)	
S833	1-786-220-11	SWITCH, KEY BOARD (I/○)	

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A-4725-834-A DIGITAL BOARD, COMPLETE

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&lt; CAPACITOR &gt;

C1001	1-126-934-11	ELECT 220uF 20%	10V
C1002	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C1003	1-126-933-11	ELECT 100uF 20%	16V
C1004	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C1005	1-126-933-11	ELECT 100uF 20%	16V
C1006	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C1007	1-126-933-11	ELECT 100uF 20%	16V
C1008	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C1009	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C1010	1-126-933-11	ELECT 100uF 20%	16V

Ref. No.	Part No.	Description	Remarks
C1011	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C1012	1-126-933-11	ELECT 100uF 20%	16V
C1013	1-126-933-11	ELECT 100uF 20%	16V
C1014	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C1015	1-126-933-11	ELECT 100uF 20%	16V
C1016	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C1017	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C1018	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C1019	1-163-009-11	CERAMIC CHIP 0.001uF 10%	50V
C1020	1-163-009-11	CERAMIC CHIP 0.001uF 10%	50V
C1021	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C1022	1-126-933-11	ELECT 100uF 20%	16V
C1023	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C1024	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C1025	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C1026	1-126-933-11	ELECT 100uF 20%	16V
C1027	1-163-031-11	CERAMIC CHIP 0.01uF	50V
C1034	1-163-031-11	CERAMIC CHIP 0.01uF	50V
C1035	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C1037	1-163-117-00	CERAMIC CHIP 100PF 5%	50V
C1038	1-163-117-00	CERAMIC CHIP 100PF 5%	50V
C1039	1-162-927-11	CERAMIC CHIP 100PF 5%	50V
C1040	1-162-927-11	CERAMIC CHIP 100PF 5%	50V
C1041	1-162-927-11	CERAMIC CHIP 100PF 5%	50V
C1042	1-162-917-11	CERAMIC CHIP 15PF 5%	50V
C1043	1-162-918-11	CERAMIC CHIP 18PF 5%	50V
C1044	1-162-964-11	CERAMIC CHIP 0.001uF 10%	50V
C1045	1-126-933-11	ELECT 100uF 20%	16V
C1046	1-136-153-00	FILM 0.01uF 5%	50V
C1047	1-136-153-00	FILM 0.01uF 5%	50V
C1048	1-126-933-11	ELECT 100uF 20%	16V
C1049	1-162-974-11	CERAMIC CHIP 0.01uF	50V
C1050	1-162-974-11	CERAMIC CHIP 0.01uF	50V
C1051	1-162-974-11	CERAMIC CHIP 0.01uF	50V
C1052	1-162-964-11	CERAMIC CHIP 0.001uF 10%	50V
C1118	1-126-935-11	ELECT 470uF 20%	16V
C2003	1-162-964-11	CERAMIC CHIP 0.001uF 10%	50V
C2004	1-162-964-11	CERAMIC CHIP 0.001uF 10%	50V
C2005	1-162-964-11	CERAMIC CHIP 0.001uF 10%	50V

&lt; CONNECTOR &gt;

CN1001	1-794-470-11	CONNECTOR, FFC/FPC 25P
CN1003	1-779-295-11	CONNECTOR, FFC(LIF(NON-ZIF))27P
CN1004	1-779-285-11	CONNECTOR, FFC(LIF(NON-ZIF))17P

&lt; IC &gt;

IC1001	8-759-828-80	IC M30805MG-205GP
IC1004	8-759-988-58	IC BA6209N
IC1005	8-759-675-78	IC UDA1360TS/N1.118
IC1006	8-759-675-77	IC UDA1350AH

&lt; COIL &gt;

L1001	1-412-533-21	INDUCTOR 47uH
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DIGITAL

HEAD PHONE

LED

Ref. No.	Part No.	Description	Remarks
< TRANSISTOR >			
Q1001	1-801-806-11	TRANSISTOR DTC144EK-T146	
Q1002	8-729-602-36	TRANSISTOR 2SA1602TP-1EF	
Q1003	8-729-602-36	TRANSISTOR 2SA1602TP-1EF	
Q1004	8-729-403-35	TRANSISTOR UN5113-TX	
Q2001	8-729-602-36	TRANSISTOR 2SA1602TP-1EF	
Q2002	8-729-038-67	TRANSISTOR KRC102S	
< RESISTOR >			
R1001	1-216-066-00	METAL CHIP 5.1K 5% 1/10W	
R1002	1-216-066-00	METAL CHIP 5.1K 5% 1/10W	
R1005	1-216-025-11	RES-CHIP 100 5% 1/10W	
R1006	1-216-025-11	RES-CHIP 100 5% 1/10W	
R1007	1-216-025-11	RES-CHIP 100 5% 1/10W	
R1010	1-216-025-11	RES-CHIP 100 5% 1/10W	
R1011	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R1012	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R1013	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R1014	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R1015	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R1016	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R1017	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R1018	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R1024	1-216-041-00	METAL CHIP 470 5% 1/10W	
R1029	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R1030	1-216-827-11	METAL CHIP 3.3K 5% 1/16W	
R1033	1-216-824-11	METAL CHIP 1.8K 5% 1/16W	
R1034	1-216-825-11	METAL CHIP 2.2K 5% 1/16W	
R1035	1-216-073-00	RES-CHIP 10K 5% 1/10W	
R1036	1-216-295-00	SHORT 0	
R1057	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	
R1058	1-216-025-11	RES-CHIP 100 5% 1/10W	
R1059	1-216-025-11	RES-CHIP 100 5% 1/10W	
R1060	1-216-025-11	RES-CHIP 100 5% 1/10W	
R1067	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R1068	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R1071	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R1072	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R1073	1-216-073-00	RES-CHIP 10K 5% 1/10W	
R1075	1-216-025-11	RES-CHIP 100 5% 1/10W	
R1076	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R1077	1-216-295-00	SHORT 0	
R1078	1-216-864-11	METAL CHIP 0 5% 1/16W	
R1080	1-216-864-11	METAL CHIP 0 5% 1/16W	
R1081	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R1082	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R1085	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R1087	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R1088	1-216-069-00	METAL CHIP 6.8K 5% 1/10W	
R1090	1-216-817-11	METAL CHIP 470 5% 1/16W	
R1091	1-216-813-11	METAL CHIP 220 5% 1/16W	
R1092	1-216-813-11	METAL CHIP 220 5% 1/16W	
R1093	1-216-033-00	METAL CHIP 220 5% 1/10W	
R1094	1-216-813-11	METAL CHIP 220 5% 1/16W	
R1095	1-216-039-00	METAL CHIP 390 5% 1/10W	
R2002	1-216-296-11	SHORT 0	
R2005	1-216-864-11	METAL CHIP 0 5% 1/16W	
R2006	1-216-809-11	METAL CHIP 100 5% 1/16W	
R2007	1-216-845-11	METAL CHIP 100K 5% 1/16W	

Ref. No.	Part No.	Description	Remarks
R2008	1-216-809-11	METAL CHIP 100 5% 1/16W	
< VIBRATOR >			
X1001	1-579-175-11	VIBRATOR, CERAMIC (10MHz)	
*****			
	1-682-095-11	HEAD PHONE BOARD	
*****			
< CAPACITOR >			
C132	1-124-584-00	ELECT 100uF 20% 10V	
C135	1-164-227-11	CERAMIC CHIP 0.022uF 10% 25V	
C232	1-124-584-00	ELECT 100uF 20% 10V	
C235	1-164-227-11	CERAMIC CHIP 0.022uF 10% 25V	
< FERRITE BEAD >			
FB101	1-469-144-21	FERRITE 0uH	
FB201	1-469-144-21	FERRITE 0uH	
FB305	1-469-144-21	FERRITE 0uH	
< JACK >			
J301	1-794-453-11	JACK (PHONES)	
< COIL >			
L101	1-412-006-31	INDUCTOR 10uH	
L201	1-412-006-31	INDUCTOR 10uH	
< TRANSISTOR >			
Q132	8-729-920-31	TRANSISTOR DTC343TK-T-146	
Q232	8-729-920-31	TRANSISTOR DTC343TK-T-146	
< RESISTOR >			
R128	1-216-801-11	METAL CHIP 22 5% 1/16W	
R139	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	
R228	1-216-801-11	METAL CHIP 22 5% 1/16W	
R239	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	
*****			
	1-682-096-11	LED BOARD	
*****			
< CONNECTOR >			
* CN803	1-506-984-11	PIN, CONNECTOR (PC BOARD) 2P	
< DIODE >			
D801	8-719-073-89	DIODE NSPW315BS (BACK LIGHT)	
D802	8-719-073-89	DIODE NSPW315BS (BACK LIGHT)	
D803	8-719-073-89	DIODE NSPW315BS (BACK LIGHT)	
< RESISTOR >			
R844	1-216-817-11	METAL CHIP 470 5% 1/16W	
R845	1-216-817-11	METAL CHIP 470 5% 1/16W	
R846	1-216-817-11	METAL CHIP 470 5% 1/16W	
R849	1-216-817-11	METAL CHIP 470 5% 1/16W	
R850	1-216-817-11	METAL CHIP 470 5% 1/16W	
R851	1-216-817-11	METAL CHIP 470 5% 1/16W	
*****			



# HCD-J300

## LOADING

## MAIN

Ref. No.	Part No.	Description	Remarks
	1-676-599-11	LOADING BOARD *****	
		< CONNECTOR >	
* CN1	1-568-943-11	PIN, CONNECTOR 5P	
		< SWITCH >	
S1	1-771-799-11	SWITCH, LEVER (SLIDE)(DISK TRAY OPEN DET)	
		*****	
	A-4726-246-A	MAIN MOUNTED BOARD, COMPLETE (AEP,UK)	
	A-4726-247-A	MAIN MOUNTED BOARD, COMPLETE (TW)	
	A-4726-248-A	MAIN MOUNTED BOARD, COMPLETE (HK,SP)	
		*****	
	1-823-149-11	LEAD (WITH CONNECTOR)	
	4-217-354-11	BUSHING, INSULATING	
	4-230-078-01	SCREW, +BV TAPPING (AEP,UK,TW)	
	7-685-546-14	SCREW +BTP 3X8 TYPE2 N-S	
	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
		< CAPACITOR >	
C101	1-126-963-11	ELECT 4.7uF 20% 50V	
C102	1-126-963-11	ELECT 4.7uF 20% 50V	
C103	1-126-963-11	ELECT 4.7uF 20% 50V	
C104	1-126-963-11	ELECT 4.7uF 20% 50V	
C105	1-126-963-11	ELECT 4.7uF 20% 50V	
C106	1-126-963-11	ELECT 4.7uF 20% 50V	
C106	1-126-947-11	ELECT 47uF 20% 16V	(TW)
C107	1-115-467-11	CERAMIC CHIP 0.22uF 10% 10V	(AEP,UK,HK,SP)
C107	1-109-982-11	CERAMIC CHIP 1uF 10% 10V	(TW)
C108	1-115-467-11	CERAMIC CHIP 0.22uF 10% 10V	(AEP,UK,HK,SP)
C109	1-162-927-11	CERAMIC CHIP 100PF 5% 50V	
C110	1-126-963-11	ELECT 4.7uF 20% 50V	
C111	1-164-245-11	CERAMIC CHIP 0.015uF 10% 25V	
C112	1-164-245-11	CERAMIC CHIP 0.015uF 10% 25V	
C113	1-115-467-11	CERAMIC CHIP 0.22uF 10% 10V	
C114	1-162-927-11	CERAMIC CHIP 100PF 5% 50V	
C115	1-162-965-11	CERAMIC CHIP 0.0015uF 10% 50V	
C116	1-162-962-11	CERAMIC CHIP 470PF 10% 50V	
C117	1-162-927-11	CERAMIC CHIP 100PF 5% 50V	
C118	1-115-467-11	CERAMIC CHIP 0.22uF 10% 10V	
C120	1-164-245-11	CERAMIC CHIP 0.015uF 10% 25V	
C121	1-162-962-11	CERAMIC CHIP 470PF 10% 50V	
C123	1-126-964-11	ELECT 10uF 20% 50V	
C124	1-162-962-11	CERAMIC CHIP 470PF 10% 50V	
C125	1-126-965-11	ELECT 22uF 20% 50V	
C127	1-130-495-00	MYLAR 0.1uF 5% 50V	
C128	1-130-495-00	MYLAR 0.1uF 5% 50V	
C130	1-115-467-11	CERAMIC CHIP 0.22uF 10% 10V	
C131	1-162-964-11	CERAMIC CHIP 0.001uF 10% 50V	
C132	1-216-864-11	METAL CHIP 0 5% 1/16W	
C133	1-115-467-11	CERAMIC CHIP 0.22uF 10% 10V	
C140	1-162-962-11	CERAMIC CHIP 470PF 10% 50V	
C150	1-126-947-11	ELECT 47uF 20% 16V	
C201	1-126-963-11	ELECT 4.7uF 20% 50V	
C202	1-126-963-11	ELECT 4.7uF 20% 50V	

Ref. No.	Part No.	Description	Remarks
C203	1-126-963-11	ELECT 4.7uF 20% 50V	
C204	1-126-963-11	ELECT 4.7uF 20% 50V	
C205	1-126-963-11	ELECT 4.7uF 20% 50V	
C206	1-126-963-11	ELECT 4.7uF 20% 50V	
C206	1-126-947-11	ELECT 47uF 20% 16V	(TW)
C207	1-115-467-11	CERAMIC CHIP 0.22uF 10% 10V	(AEP,UK,HK,SP)
C207	1-109-982-11	CERAMIC CHIP 1uF 10% 10V	(TW)
C208	1-115-467-11	CERAMIC CHIP 0.22uF 10% 10V	(AEP,UK,HK,SP)
C209	1-162-927-11	CERAMIC CHIP 100PF 5% 50V	
C210	1-126-963-11	ELECT 4.7uF 20% 50V	
C211	1-164-245-11	CERAMIC CHIP 0.015uF 10% 25V	
C212	1-164-245-11	CERAMIC CHIP 0.015uF 10% 25V	
C213	1-162-962-11	CERAMIC CHIP 470PF 10% 50V	
C214	1-162-927-11	CERAMIC CHIP 100PF 5% 50V	
C215	1-162-965-11	CERAMIC CHIP 0.0015uF 10% 50V	
C216	1-115-467-11	CERAMIC CHIP 0.22uF 10% 10V	
C217	1-162-927-11	CERAMIC CHIP 100PF 5% 50V	
C218	1-115-467-11	CERAMIC CHIP 0.22uF 10% 10V	
C220	1-164-245-11	CERAMIC CHIP 0.015uF 10% 25V	
C221	1-162-962-11	CERAMIC CHIP 470PF 10% 50V	
C223	1-126-964-11	ELECT 10uF 20% 50V	
C224	1-162-962-11	CERAMIC CHIP 470PF 10% 50V	
C225	1-126-965-11	ELECT 22uF 20% 50V	
C227	1-130-495-00	MYLAR 0.1uF 5% 50V	
C228	1-130-495-00	MYLAR 0.1uF 5% 50V	
C230	1-115-467-11	CERAMIC CHIP 0.22uF 10% 10V	
C231	1-162-964-11	CERAMIC CHIP 0.001uF 10% 50V	
C232	1-216-864-11	METAL CHIP 0 5% 1/16W	
C233	1-115-467-11	CERAMIC CHIP 0.22uF 10% 10V	
C240	1-162-962-11	CERAMIC CHIP 470PF 10% 50V	
C250	1-126-947-11	ELECT 47uF 20% 16V	
C300	1-126-961-11	ELECT 2.2uF 20% 50V	(TW)
C300	1-126-964-11	ELECT 10uF 20% 50V	(AEP,UK,HK,SP)
C301	1-126-964-11	ELECT 10uF 20% 50V	(TW)
C301	1-126-947-11	ELECT 47uF 20% 16V	(AEP,UK,HK,SP)
C302	1-126-941-11	ELECT 470uF 20% 16V	
C303	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	(TW)
C303	1-162-927-11	CERAMIC CHIP 100PF 5% 50V	(AEP,UK,HK,SP)
C304	1-104-665-11	ELECT 100uF 20% 16V	
C305	1-126-947-11	ELECT 47uF 20% 16V	
C306	1-126-963-11	ELECT 4.7uF 20% 50V	(TW)
C307	1-126-935-11	ELECT 470uF 20% 10V	
C308	1-126-961-11	ELECT 2.2uF 20% 50V	
C310	1-104-665-11	ELECT 100uF 20% 16V	(TW)
C310	1-126-941-11	ELECT 470uF 20% 16V	(AEP,UK,HK,SP)

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
C311	1-104-665-11	ELECT	100uF 20% 16V (TW)	C364	1-162-961-11	CERAMIC CHIP	330PF 10% 50V (AEP,UK)
C311	1-162-927-11	CERAMIC CHIP	100PF 5% 50V (AEP,UK,HK,SP)	C365	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V (AEP,UK)
C312	1-104-665-11	ELECT	100uF 20% 16V	C366	1-126-947-11	ELECT	47uF 20% 10V (AEP,UK)
C313	1-126-965-11	ELECT	22uF 20% 50V	C367	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V (AEP,UK)
C314	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	C368	1-115-456-21	CAPACITOR	0.22F 5.5V
C316	1-126-955-11	ELECT	4700uF 20% 35V	C369	1-115-456-21	CAPACITOR	0.22F 5.5V
C317	1-126-955-11	ELECT	4700uF 20% 35V	C372	1-162-927-11	CERAMIC CHIP	100PF 5% 50V (AEP,UK,HK,SP)
C318	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	C373	1-104-665-11	ELECT	100uF 20% 25V
C319	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	C374	1-104-666-11	ELECT	220uF 20% 10V
C320	1-126-942-61	ELECT	1000uF 20% 25V	C375	1-162-927-11	CERAMIC CHIP	100PF 5% 50V (AEP,UK,HK,SP)
C321	1-126-944-11	ELECT	3300uF 20% 25V	C376	1-162-306-11	CERAMIC	0.01uF 30% 16V (TW)
C322	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	C377	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V
C323	1-104-665-11	ELECT	100uF 20% 16V	C378	1-164-315-11	CERAMIC CHIP	470PF 5% 50V
C324	1-104-665-11	ELECT	100uF 20% 16V	C379	1-164-315-11	CERAMIC CHIP	470PF 5% 50V (TW)
C325	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	C379	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V (AEP,UK,HK,SP)
C326	1-104-665-11	ELECT	100uF 20% 16V	C380	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V (TW)
C327	1-126-964-11	ELECT	10uF 20% 50V	C380	1-216-864-11	METAL CHIP	0 5% 1/16W (AEP,UK,HK,SP)
C328	1-126-941-11	ELECT	470uF 20% 16V	C381	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V
C329	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	C383	1-162-302-11	CERAMIC	0.0022uF 30% 16V
C330	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	C385	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V
C331	1-126-767-11	ELECT	1000uF 20% 10V	C386	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V
C332	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	C387	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V (TW)
C333	1-104-665-11	ELECT	100uF 20% 16V	C388	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V (TW)
C335	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	C389	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V (HK,SP,TW)
C336	1-104-665-11	ELECT	100uF 20% 16V	C390	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V
C337	1-126-964-11	ELECT	10uF 20% 50V	C392	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V
C338	1-126-935-11	ELECT	470uF 20% 10V	C393	1-165-176-11	CERAMIC CHIP	0.047uF 10% 16V
C339	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	C394	1-125-891-11	CERAMIC CHIP	0.47uF 10% 10V
C340	1-162-967-11	CERAMIC CHIP	0.0033uF 10% 50V	C396	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V (AEP,UK)
C341	1-104-665-11	ELECT	100uF 20% 16V	C507	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C342	1-124-903-11	ELECT	1uF 20% 50V	C509	1-104-665-11	ELECT	100uF 20% 16V
C343	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	C801	1-164-160-11	CERAMIC CHIP	20PF 5% 50V
C344	1-162-966-11	CERAMIC CHIP	0.0022uF 10% 50V	C802	1-162-919-11	CERAMIC CHIP	22PF 5% 50V
C345	1-126-767-11	ELECT	1000uF 20% 10V	C803	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V
C347	1-126-947-11	ELECT	47uF 20% 16V	C804	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V
C348	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	C805	1-104-665-11	ELECT	100uF 20% 16V
C349	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	< CONNECTOR >			
C350	1-124-903-11	ELECT	1uF 20% 50V	CN301	1-794-470-11	CONNECTOR, FFC/FPC	25P
C351	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	CN302	1-779-290-11	CONNECTOR, FFC(LIF(NON-ZIF))	22P
C352	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	* CN303	1-569-366-11	SOCKET, CONNECTOR	18P
C353	1-126-947-11	ELECT	47uF 20% 16V	CN304	1-794-470-11	CONNECTOR, FFC/FPC	25P (TW)
C354	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	* CN304	1-565-650-11	SOCKET, CONNECTOR	25P (AEP,UK,HK,SP)
C355	1-126-961-11	ELECT	2.2uF 20% 50V (AEP,UK)	* CN306	1-568-954-11	PIN, CONNECTOR	5P
C356	1-126-964-11	ELECT	10uF 20% 50V (AEP,UK)	* CN308	1-568-954-11	PIN, CONNECTOR	5P
C357	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	* CN503	1-568-954-11	PIN, CONNECTOR	5P (TW)
C358	1-164-739-11	CERAMIC CHIP	560PF 5% 50V (AEP,UK)				
C360	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V (AEP,UK)				
C361	1-164-185-11	CERAMIC CHIP	13PF 5% 50V (AEP,UK)				
C362	1-164-185-11	CERAMIC CHIP	13PF 5% 50V (AEP,UK)				
C363	1-104-665-11	ELECT	100uF 20% 16V				

# HCD-J300

## MAIN

Ref. No.	Part No.	Description	Remarks
< DIODE >			
D301	8-719-929-15	DIODE MTZJ-T-77-9.1B (TW)	
D302	8-719-991-33	DIODE 1SS133T-77(TW)	
D303	8-719-200-82	DIODE 11ES2-TA1B	
D304	8-719-050-84	DIODE RB441QT-77	
D305	8-719-200-82	DIODE 11ES2-TA1B	
D306	8-719-200-82	DIODE 11ES2-TA1B	
D307	8-719-200-82	DIODE 11ES2-TA1B	
D308	8-719-991-33	DIODE 1SS133T-77	
D309	8-719-991-33	DIODE 1SS133T-77	
D310	8-719-110-17	DIODE MTZJ-T-77-10B	
D311	8-719-921-63	DIODE MTZJ-T-77-7.5B	
D312	8-719-109-89	DIODE MTZJ-T-77-5.6B	
D313	8-719-921-80	DIODE MTZJ-T-77-11B	
D314	8-719-200-82	DIODE 11ES2-TA1B	
D315	8-719-200-82	DIODE 11ES2-TA1B	
D316	8-719-200-82	DIODE 11ES2-TA1B	
D317	8-719-200-82	DIODE 11ES2-TA1B	
D318	8-719-200-82	DIODE 11ES2-TA1B	
D319	8-719-991-33	DIODE 1SS133T-77	
D320	8-719-050-84	DIODE RB441QT-77	
D321	8-719-991-33	DIODE 1SS133T-77	
D322	8-719-991-33	DIODE 1SS133T-77	
D323	8-719-991-33	DIODE 1SS133T-77	
D324	8-719-991-33	DIODE 1SS133T-77	
D325	8-719-991-33	DIODE 1SS133T-77	
D326	8-719-200-82	DIODE 11ES2-TA1B	
D330	8-719-921-40	DIODE MTZJ-T-77-4.7C	
D331	8-719-982-11	DIODE MTZJ-T-77-4.3B (AEP,UK)	
D332	8-719-991-33	DIODE 1SS133T-77 (AEP,UK)	
D336	8-719-110-08	DIODE MTZJ-T-77-8.2B (TW)	
D336	8-719-109-93	DIODE MTZJ-T-77-6.2B (AEP,UK,HK,SP)	
< FERRITE BEAD/CONDUCTOR >			
FB301	1-414-813-11	FERRITE 0uH	
FB302	1-216-864-11	METAL CHIP 0 5% 1/16W	
FB303	1-414-813-11	FERRITE 0uH (TW)	
FB303	1-216-864-11	METAL CHIP 0 5% 1/16W (AEP,UK,HK,SP)	
FB304	1-414-813-11	FERRITE 0uH	
FB306	1-216-864-11	METAL CHIP 0 5% 1/16W (TW)	
FB306	1-414-813-11	FERRITE 0uH (AEP,UK,HK,SP)	
FB307	1-216-864-11	METAL CHIP 0 5% 1/16W (TW)	
FB307	1-414-813-11	FERRITE 0uH (AEP,UK,HK,SP)	
FB308	1-216-864-11	METAL CHIP 0 5% 1/16W (TW)	
FB308	1-414-813-11	FERRITE 0uH (AEP,UK,HK,SP)	
FB309	1-216-864-11	METAL CHIP 0 5% 1/16W (TW)	
FB309	1-414-813-11	FERRITE 0uH (AEP,UK,HK,SP)	
FB310	1-216-864-11	METAL CHIP 0 5% 1/16W (TW)	
FB310	1-414-813-11	FERRITE 0uH (AEP,UK,HK,SP)	
FB311	1-216-864-11	METAL CHIP 0 5% 1/16W (TW)	

Ref. No.	Part No.	Description	Remarks
FB311	1-414-813-11	FERRITE 0uH (AEP,UK,HK,SP)	
FB312	1-216-864-11	METAL CHIP 0 5% 1/16W (TW)	
FB312	1-414-813-11	FERRITE 0uH (AEP,UK,HK,SP)	
FB313	1-216-864-11	METAL CHIP 0 5% 1/16W (TW)	
FB313	1-414-813-11	FERRITE 0uH (AEP,UK,HK,SP)	
FB314	1-216-864-11	METAL CHIP 0 5% 1/16W	
FB315	1-216-864-11	METAL CHIP 0 5% 1/16W (TW)	
FB315	1-414-813-11	FERRITE 0uH (AEP,UK,HK,SP)	
FB316	1-216-864-11	METAL CHIP 0 5% 1/16W (TW)	
FB316	1-414-813-11	FERRITE 0uH (AEP,UK,HK,SP)	
FB317	1-216-864-11	METAL CHIP 0 5% 1/16W (TW)	
FB317	1-414-813-11	FERRITE 0uH (AEP,UK,HK,SP)	
FB318	1-216-864-11	METAL CHIP 0 5% 1/16W	
FB319	1-216-864-11	METAL CHIP 0 5% 1/16W	
FB320	1-216-864-11	METAL CHIP 0 5% 1/16W (HK,SP,TW)	
FB320	1-414-813-11	FERRITE 0uH (AEP,UK)	
FB321	1-216-864-11	METAL CHIP 0 5% 1/16W	
FB322	1-410-993-11	INDUCTOR CHIP 1uH (AEP,UK,HK,SP)	
FB322	1-216-864-11	METAL CHIP 0 5% 1/16W (TW)	
FB323	1-216-864-11	METAL CHIP 0 5% 1/16W	
FB324	1-216-864-11	METAL CHIP 0 5% 1/16W	
FB325	1-216-864-11	METAL CHIP 0 5% 1/16W	
FB326	1-216-864-11	METAL CHIP 0 5% 1/16W	
FB327	1-414-813-11	FERRITE 0uH (TW)	
FB327	1-216-864-11	METAL CHIP 0 5% 1/16W (AEP,UK)	
< IC >			
IC101	8-759-584-38	IC TDA7296	
IC201	8-759-584-38	IC TDA7296	
IC301	6-700-261-01	IC BD3861FS	
IC302	8-759-359-49	IC NJM3414AV(TE2)	
IC303	8-759-646-54	IC KIA7808API	
IC305	8-759-686-72	IC uPC29L04J-T	
IC306	6-800-349-01	IC M30622MGA-A66FP	
IC307	8-759-584-65	IC KA3082	
IC308	8-759-481-02	IC M62016L	
IC309	8-759-557-36	IC BU1924F-E2 (AEP,UK)	
IC310	8-759-646-53	IC KIA7812API	
IC311	8-759-646-54	IC KIA7808API	
IC313	8-759-646-54	IC KIA7808API	
IC314	8-759-646-52	IC KIA7805API	
IC315	8-759-646-52	IC KIA7805API	
IC316	8-759-637-58	IC PST592C-T	
IC503	8-759-548-57	IC SN74LV00ANSR	
< CONDUCTOR >			
JR101	1-216-864-11	METAL CHIP 0 5% 1/16W	
JR201	1-216-864-11	METAL CHIP 0 5% 1/16W	
JR301	1-216-864-11	METAL CHIP 0 5% 1/16W	
JR302	1-216-864-11	METAL CHIP 0 5% 1/16W	
JR304	1-216-864-11	METAL CHIP 0 5% 1/16W	



Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
JR305	1-216-864-11	METAL CHIP	0 5% 1/16W	R108	1-216-827-11	METAL CHIP	3.3K 5% 1/16W
JR306	1-216-864-11	METAL CHIP	0 5% 1/16W (TW)	R109	1-249-421-11	CARBON	2.2K 5% 1/4W F
JR307	1-216-864-11	METAL CHIP	0 5% 1/16W (TW)	R110	1-216-837-11	METAL CHIP	22K 5% 1/16W
JR308	1-216-864-11	METAL CHIP	0 5% 1/16W (TW)	R112	1-216-833-11	METAL CHIP	10K 5% 1/16W
JR309	1-216-864-11	METAL CHIP	0 5% 1/16W (AEP,UK,HK,SP)	R113	1-216-829-11	METAL CHIP	4.7K 5% 1/16W
JR310	1-216-864-11	METAL CHIP	0 5% 1/16W	R121	1-216-832-11	METAL CHIP	8.2K 5% 1/16W (TW)
JR312	1-109-982-11	CERAMIC CHIP	1uF 10% 10V	R121	1-216-833-11	METAL CHIP	10K 5% 1/16W (AEP,UK,HK,SP)
JR314	1-216-864-11	METAL CHIP	0 5% 1/16W (TW)	R122	1-216-829-11	METAL CHIP	4.7K 5% 1/16W
		< COIL >		R123	1-216-829-11	METAL CHIP	4.7K 5% 1/16W
L101	1-420-872-00	COIL, AIR-CORE		R126	1-249-417-11	CARBON	1K 5% 1/4W F
L201	1-420-872-00	COIL, AIR-CORE		R127	1-216-817-11	METAL CHIP	470 5% 1/16W
L301	1-408-599-31	INDUCTOR	4.7uH (AEP,UK,HK,SP)	R128	1-216-841-11	METAL CHIP	47K 5% 1/16W
		< JACK >		R129	1-216-837-11	METAL CHIP	22K 5% 1/16W
PJ301	1-815-636-11	JACK, PIN 2P (ANALOG IN)		R130	1-216-845-11	METAL CHIP	100K 5% 1/16W
		< TRANSISTOR >		R131	1-249-389-11	CARBON	4.7 5% 1/4W F
Q101	8-729-920-31	TRANSISTOR	DTC343TK-T-146	R132	1-216-833-11	METAL CHIP	10K 5% 1/16W
Q201	8-729-920-31	TRANSISTOR	DTC343TK-T-146	R133	1-216-833-11	METAL CHIP	10K 5% 1/16W
Q303	8-729-056-23	TRANSISTOR	STC352-OY	R134	1-218-272-11	RES-CHIP	5.1K 5% 1/16W (TW)
Q304	8-729-056-23	TRANSISTOR	STC352-OY	R134	1-216-833-11	METAL CHIP	10K 5% 1/16W (AEP,UK,HK,SP)
Q305	8-729-055-91	TRANSISTOR	SRA2202S	R135	1-216-813-11	METAL CHIP	220 5% 1/16W
Q306	8-729-055-94	TRANSISTOR	SRC1202S	R136	1-216-821-11	METAL CHIP	1K 5% 1/16W
Q307	8-729-055-91	TRANSISTOR	SRA2202S	R143	1-249-421-11	CARBON	2.2K 5% 1/4W F (TW)
Q308	8-729-055-94	TRANSISTOR	SRC1202S	R143	1-216-833-11	METAL CHIP	10K 5% 1/16W (AEP,UK,HK,SP)
Q309	8-729-019-00	TRANSISTOR	KTC2026	R201	1-216-830-11	METAL CHIP	5.6K 5% 1/16W
Q310	8-729-055-91	TRANSISTOR	SRA2202S	R202	1-216-837-11	METAL CHIP	22K 5% 1/16W
Q311	8-729-055-94	TRANSISTOR	SRC1202S	R204	1-216-829-11	METAL CHIP	4.7K 5% 1/16W
Q312	8-729-019-00	TRANSISTOR	KTC2026	R205	1-249-421-11	CARBON	2.2K 5% 1/4W F
Q315	8-729-055-91	TRANSISTOR	SRA2202S	R206	1-216-849-11	METAL CHIP	220K 5% 1/16W
Q316	8-729-055-94	TRANSISTOR	SRC1202S	R207	1-216-830-11	METAL CHIP	5.6K 5% 1/16W
Q318	8-729-055-91	TRANSISTOR	SRA2202S	R208	1-216-837-11	METAL CHIP	22K 5% 1/16W
Q319	8-729-034-51	TRANSISTOR	KTC3875	R209	1-249-421-11	CARBON	2.2K 5% 1/4W F
Q320	8-729-202-56	TRANSISTOR	2SA950-Y-TPE2	R212	1-216-833-11	METAL CHIP	10K 5% 1/16W
Q321	8-729-055-94	TRANSISTOR	SRC1202S	R213	1-216-829-11	METAL CHIP	4.7K 5% 1/16W
Q322	8-729-202-56	TRANSISTOR	2SA950-Y-TPE2	R221	1-216-832-11	METAL CHIP	8.2K 5% 1/16W (TW)
Q323	8-729-055-94	TRANSISTOR	SRC1202S	R221	1-216-833-11	METAL CHIP	10K 5% 1/16W (AEP,UK,HK,SP)
Q329	8-729-120-28	TRANSISTOR	2SC2412K-T-146-QR (AEP,UK)	R222	1-216-829-11	METAL CHIP	4.7K 5% 1/16W
Q330	8-729-055-91	TRANSISTOR	SRA2202S	R223	1-216-829-11	METAL CHIP	4.7K 5% 1/16W
Q331	8-729-055-94	TRANSISTOR	SRC1202S	R226	1-216-821-11	METAL CHIP	1K 5% 1/16W
Q333	8-729-055-94	TRANSISTOR	SRC1202S	R227	1-216-817-11	METAL CHIP	470 5% 1/16W
Q335	8-729-037-02	TRANSISTOR	KTA1266Y-AT	R228	1-216-841-11	METAL CHIP	47K 5% 1/16W
Q337	8-729-055-94	TRANSISTOR	SRC1202S	R229	1-216-837-11	METAL CHIP	22K 5% 1/16W
Q338	8-729-055-91	TRANSISTOR	SRA2202S (TW)	R230	1-216-845-11	METAL CHIP	100K 5% 1/16W
Q339	8-729-055-94	TRANSISTOR	SRC1202S	R231	1-249-389-11	CARBON	4.7 5% 1/4W F
		< RESISTOR >		R232	1-216-833-11	METAL CHIP	10K 5% 1/16W
R102	1-216-837-11	METAL CHIP	22K 5% 1/16W	R233	1-216-833-11	METAL CHIP	10K 5% 1/16W
R104	1-216-829-11	METAL CHIP	4.7K 5% 1/16W	R234	1-218-272-11	RES-CHIP	5.1K 5% 1/16W (TW)
R105	1-249-421-11	CARBON	2.2K 5% 1/4W F	R234	1-216-833-11	METAL CHIP	10K 5% 1/16W (AEP,UK,HK,SP)
R106	1-216-849-11	METAL CHIP	220K 5% 1/16W	R235	1-216-813-11	METAL CHIP	220 5% 1/16W
R107	1-216-827-11	METAL CHIP	3.3K 5% 1/16W	R236	1-216-821-11	METAL CHIP	1K 5% 1/16W
				R243	1-216-833-11	METAL CHIP	10K 5% 1/16W



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## MAIN

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
R300	1-216-813-11	METAL CHIP	220 5% 1/16W	R357	1-216-821-11	METAL CHIP	1K 5% 1/16W
R301	1-249-410-11	CARBON	270 5% 1/4W F (TW)	R358	1-216-821-11	METAL CHIP	1K 5% 1/16W
R301	1-216-809-11	METAL CHIP	100 5% 1/16W (AEP,UK,HK,SP)	R360	1-216-864-11	METAL CHIP	0 5% 1/16W
R302	1-249-409-11	CARBON	220 5% 1/4W F (HK,SP)	R361	1-216-833-11	METAL CHIP	10K 5% 1/16W
R302	1-249-411-11	CARBON	330 5% 1/4W (AEP,UK,TW)	R362	1-216-845-11	METAL CHIP	100K 5% 1/16W
R303	1-249-413-11	CARBON	470 5% 1/4W F	R363	1-216-825-11	METAL CHIP	2.2K 5% 1/16W
R304	1-216-864-11	METAL CHIP	0 5% 1/16W	R364	1-249-413-11	CARBON	470 5% 1/4W F
R305	1-216-833-11	METAL CHIP	10K 5% 1/16W	R365	1-216-833-11	METAL CHIP	10K 5% 1/16W
R307	1-216-809-11	METAL CHIP	100 5% 1/16W (TW)	R366	1-216-833-11	METAL CHIP	10K 5% 1/16W
R307	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V (AEP,UK,HK,SP)	R367	1-216-843-11	METAL CHIP	68K 5% 1/16W
R310	1-249-401-11	CARBON	47 5% 1/4W F (AEP,UK,HK,SP)	R368	1-216-841-11	METAL CHIP	47K 5% 1/16W
R313	1-216-823-11	METAL CHIP	1.5K 5% 1/16W	R370	1-216-841-11	METAL CHIP	47K 5% 1/16W
R314	1-216-815-11	METAL CHIP	330 5% 1/16W	R371	1-216-821-11	METAL CHIP	1K 5% 1/16W
R315	1-216-864-11	METAL CHIP	0 5% 1/16W	R372	1-216-829-11	METAL CHIP	4.7K 5% 1/16W
R316	1-216-827-11	METAL CHIP	3.3K 5% 1/16W	R373	1-216-829-11	METAL CHIP	4.7K 5% 1/16W
R317	1-216-849-11	METAL CHIP	220K 5% 1/16W	R374	1-216-829-11	METAL CHIP	4.7K 5% 1/16W
R319	1-216-833-11	METAL CHIP	10K 5% 1/16W	R389	1-216-829-11	METAL CHIP	4.7K 5% 1/16W (HK,SP,TW)
R320	1-216-827-11	METAL CHIP	3.3K 5% 1/16W	R389	1-216-864-11	METAL CHIP	0 5% 1/16W (AEP,UK)
R321	1-216-833-11	METAL CHIP	10K 5% 1/16W	R401	1-216-841-11	METAL CHIP	47K 5% 1/16W
R322	1-216-864-11	METAL CHIP	0 5% 1/16W	R402	1-216-821-11	METAL CHIP	1K 5% 1/16W
R326	1-216-809-11	METAL CHIP	100 5% 1/16W	R403	1-216-821-11	METAL CHIP	1K 5% 1/16W
R327	1-216-833-11	METAL CHIP	10K 5% 1/16W	R404	1-216-821-11	METAL CHIP	1K 5% 1/16W
R328	1-216-833-11	METAL CHIP	10K 5% 1/16W	R405	1-216-821-11	METAL CHIP	1K 5% 1/16W
R329	1-216-841-11	METAL CHIP	47K 5% 1/16W	R406	1-216-821-11	METAL CHIP	1K 5% 1/16W
R330	1-216-841-11	METAL CHIP	47K 5% 1/16W	R407	1-216-821-11	METAL CHIP	1K 5% 1/16W
R331	1-216-837-11	METAL CHIP	22K 5% 1/16W	R409	1-216-829-11	METAL CHIP	4.7K 5% 1/16W
R333	1-216-829-11	METAL CHIP	4.7K 5% 1/16W	R419	1-216-821-11	METAL CHIP	1K 5% 1/16W
R334	1-216-825-11	METAL CHIP	2.2K 5% 1/16W	R420	1-216-821-11	METAL CHIP	1K 5% 1/16W
R336	1-216-864-11	METAL CHIP	0 5% 1/16W	R421	1-216-821-11	METAL CHIP	1K 5% 1/16W
R340	1-216-833-11	METAL CHIP	10K 5% 1/16W	R422	1-216-821-11	METAL CHIP	1K 5% 1/16W
R341	1-216-833-11	METAL CHIP	10K 5% 1/16W	R423	1-216-821-11	METAL CHIP	1K 5% 1/16W
R342	1-216-809-11	METAL CHIP	100 5% 1/16W (AEP,UK)	R424	1-216-825-11	METAL CHIP	2.2K 5% 1/16W
R343	1-216-857-11	METAL CHIP	1M 5% 1/16W (AEP,UK)	R425	1-216-821-11	METAL CHIP	1K 5% 1/16W
R344	1-216-821-11	METAL CHIP	1K 5% 1/16W (AEP,UK)	R426	1-216-849-11	METAL CHIP	220K 5% 1/16W
R345	1-216-809-11	METAL CHIP	100 5% 1/16W (AEP,UK)	R427	1-216-821-11	METAL CHIP	1K 5% 1/16W
R346	1-216-845-11	METAL CHIP	100K 5% 1/16W (AEP,UK)	R428	1-216-845-11	METAL CHIP	100K 5% 1/16W
R347	1-216-821-11	METAL CHIP	1K 5% 1/16W (AEP,UK)	R429	1-247-807-31	CARBON	100 5% 1/4W
R348	1-216-853-11	METAL CHIP	470K 5% 1/16W (AEP,UK)	R430	1-247-807-31	CARBON	100 5% 1/4W
R349	1-216-829-11	METAL CHIP	4.7K 5% 1/16W (AEP,UK)	R432	1-216-821-11	METAL CHIP	1K 5% 1/16W
R350	1-216-809-11	METAL CHIP	100 5% 1/16W (AEP,UK)	R433	1-216-821-11	METAL CHIP	1K 5% 1/16W
R351	1-249-407-11	CARBON	150 5% 1/4W F (AEP,UK)	R434	1-216-821-11	METAL CHIP	1K 5% 1/16W
R352	1-216-841-11	METAL CHIP	47K 5% 1/16W	R435	1-249-417-11	CARBON	1K 5% 1/4W F
R353	1-216-841-11	METAL CHIP	47K 5% 1/16W	R436	1-249-417-11	CARBON	1K 5% 1/4W F
R355	1-216-821-11	METAL CHIP	1K 5% 1/16W	R437	1-249-417-11	CARBON	1K 5% 1/4W F
R356	1-216-821-11	METAL CHIP	1K 5% 1/16W	R438	1-249-417-11	CARBON	1K 5% 1/4W F
				R439	1-216-821-11	METAL CHIP	1K 5% 1/16W
				R440	1-216-821-11	METAL CHIP	1K 5% 1/16W
				R441	1-216-821-11	METAL CHIP	1K 5% 1/16W
				R442	1-249-417-11	CARBON	1K 5% 1/4W F
				R443	1-216-821-11	METAL CHIP	1K 5% 1/16W
				R444	1-216-801-11	METAL CHIP	22 5% 1/16W
				R445	1-216-821-11	METAL CHIP	1K 5% 1/16W
				R446	1-216-845-11	METAL CHIP	100K 5% 1/16W
				R448	1-216-821-11	METAL CHIP	1K 5% 1/16W
				R449	1-216-821-11	METAL CHIP	1K 5% 1/16W

MAIN

OPTICAL

POWER

Ref. No.	Part No.	Description	Remarks
R450	1-216-821-11	METAL CHIP	1K 5% 1/16W
R452	1-216-821-11	METAL CHIP	1K 5% 1/16W
R453	1-216-821-11	METAL CHIP	1K 5% 1/16W
R454	1-216-833-11	METAL CHIP	10K 5% 1/16W
R455	1-216-821-11	METAL CHIP	1K 5% 1/16W
R456	1-216-821-11	METAL CHIP	1K 5% 1/16W
R457	1-216-821-11	METAL CHIP	1K 5% 1/16W
R458	1-216-821-11	METAL CHIP	1K 5% 1/16W
R466	1-216-821-11	METAL CHIP	1K 5% 1/16W
R467	1-216-821-11	METAL CHIP	1K 5% 1/16W
R468	1-216-821-11	METAL CHIP	1K 5% 1/16W
R474	1-216-821-11	METAL CHIP	1K 5% 1/16W
R475	1-249-417-11	CARBON	1K 5% 1/4W F
R476	1-216-821-11	METAL CHIP	1K 5% 1/16W
R477	1-216-821-11	METAL CHIP	1K 5% 1/16W
R478	1-216-821-11	METAL CHIP	1K 5% 1/16W
R479	1-216-821-11	METAL CHIP	1K 5% 1/16W
R480	1-216-821-11	METAL CHIP	1K 5% 1/16W
R481	1-216-821-11	METAL CHIP	1K 5% 1/16W
R482	1-216-821-11	METAL CHIP	1K 5% 1/16W
R483	1-216-821-11	METAL CHIP	1K 5% 1/16W
R484	1-216-821-11	METAL CHIP	1K 5% 1/16W
R485	1-216-821-11	METAL CHIP	1K 5% 1/16W
R486	1-216-821-11	METAL CHIP	1K 5% 1/16W
R487	1-216-821-11	METAL CHIP	1K 5% 1/16W
R488	1-216-821-11	METAL CHIP	1K 5% 1/16W
R489	1-216-821-11	METAL CHIP	1K 5% 1/16W
R490	1-216-821-11	METAL CHIP	1K 5% 1/16W
R491	1-216-821-11	METAL CHIP	1K 5% 1/16W
R492	1-216-821-11	METAL CHIP	1K 5% 1/16W
R493	1-216-821-11	METAL CHIP	1K 5% 1/16W
R494	1-216-821-11	METAL CHIP	1K 5% 1/16W
R495	1-216-811-11	METAL CHIP	150 5% 1/16W
R497	1-216-864-11	METAL CHIP	0 5% 1/16W (HK,SP,TW)
R497	1-216-829-11	METAL CHIP	4.7K 5% 1/16W (AEP,UK)
R506	1-216-829-11	METAL CHIP	4.7K 5% 1/16W (AEP,UK,HK,SP)
R508	1-216-829-11	METAL CHIP	4.7K 5% 1/16W (TW)
R509	1-216-821-11	METAL CHIP	1K 5% 1/16W
R513	1-216-831-11	METAL CHIP	6.8K 5% 1/16W
R990	1-216-864-11	METAL CHIP	0 5% 1/16W (AEP,UK,HK,SP)
< TERMINAL BOARD >			
SJ301	1-694-820-11	TERMINAL BOARD (SPEAKER)	
< THERMISTOR >			
TH1	1-537-770-11	TERMINAL BOARD, GROUND	
TH2	1-537-770-11	TERMINAL BOARD, GROUND	
< VIBRATOR >			
X301	1-579-242-41	VIBRATOR, CRYSTAL (AEP,UK) (4.332MHz)	
X801	1-567-098-41	VIBRATOR, CRYSTAL (32.768MHz)	
X802	1-781-107-21	VIBRATOR, CERAMIC (16MHz)	

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Ref. No.	Part No.	Description	Remarks		
	1-682-097-11	OPTICAL BOARD	*****		
< CAPACITOR >					
C550	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C551	1-104-665-11	ELECT	100uF	20%	10V
C553	1-104-665-11	ELECT	100uF	20%	10V
C554	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
< CONNECTOR >					
* CN551	1-506-989-11	PIN, CONNECTOR (PC BOARD) 7P			
< FERRITE BEAD >					
FB551	1-469-144-21	FERRITE	0uH		
< IC >					
IC551	8-749-019-61	IC JFJ4000-01SY (DIGITAL OPTICAL IN)			
< CONNECTOR >					
J302	1-774-136-11	CONNECTOR, ROUND TYPE 6P (PC LINK)			
< TRANSISTOR >					
Q301	8-729-048-96	TRANSISTOR	2SK1825		
Q302	8-729-048-96	TRANSISTOR	2SK1825		
< RESISTOR >					
R304	1-216-797-11	METAL CHIP	10	5%	1/16W
R305	1-216-797-11	METAL CHIP	10	5%	1/16W
R306	1-216-845-11	METAL CHIP	100K	5%	1/16W
R310	1-216-835-11	METAL CHIP	15K	5%	1/16W
R312	1-216-833-11	METAL CHIP	10K	5%	1/16W
R336	1-216-864-11	METAL CHIP	0	5%	1/16W
R337	1-216-864-11	METAL CHIP	0	5%	1/16W
*****					
A-4725-836-A		POWER BOARD, COMPLETE (AEP,UK)			
A-4725-850-A		POWER BOARD, COMPLETE (HK,SP,TW)			
*****					
1-533-233-11		HOLDER, FUSE			
< CAPACITOR >					
C902	1-101-005-00	CERAMIC	22000PF		50V
C903	1-101-005-00	CERAMIC	22000PF		50V
C904	1-101-005-00	CERAMIC	22000PF		50V
C905	1-101-005-00	CERAMIC	22000PF		50V
C906	1-161-494-00	CERAMIC	0.022uF		25V
C907	1-161-494-00	CERAMIC	0.022uF		25V
C908	1-161-494-00	CERAMIC	0.022uF		25V
C909	1-161-494-00	CERAMIC	0.022uF		25V
C910	1-161-494-00	CERAMIC	0.022uF		25V
C911	1-126-947-11	ELECT	47uF	20%	25V
C912	1-126-767-11	ELECT	1000uF	20%	16V
C918	1-126-964-11	ELECT	10uF	20%	50V

# HCD-J300

**POWER**
**TC**

Ref. No.	Part No.	Description	Remarks
< CONNECTOR >			
CN901	1-564-321-00	PIN, CONNECTOR 2P	
* CN902	1-764-333-11	PLUG, CONNECTOR 10P	
< DIODE >			
D902	8-719-902-17	DIODE 1N5401	
D903	8-719-902-17	DIODE 1N5401	
D904	8-719-902-17	DIODE 1N5401	
D905	8-719-902-17	DIODE 1N5401	
D906	8-719-046-07	DIODE 2A02M	
D907	8-719-046-07	DIODE 2A02M	
D908	8-719-046-07	DIODE 2A02M	
D909	8-719-046-07	DIODE 2A02M	
D910	8-719-991-33	DIODE 1SS133T-77	
D911	8-719-991-33	DIODE 1SS133T-77	
D912	8-719-991-33	DIODE 1SS133T-77	
D913	8-719-991-33	DIODE 1SS133T-77	
D915	8-719-109-97	DIODE MTZJ-T-77-6.8B	
D917	8-719-991-33	DIODE 1SS133T-77	
D918	8-719-109-93	DIODE MTZJ-T-77-6.2B	
D919	8-719-991-33	DIODE 1SS133T-77	
D920	8-719-991-33	DIODE 1SS133T-77	
< FUSE >			
△F901	1-533-466-11	FUSE, GLASS TUBE (DIA. 5)(T1.25AL/250V)	(SP, HK, TW)
△F902	1-533-468-11	FUSE, GLASS TUBE (DIA. 5)(T2AL/250V)	(SP, HK, TW)
△F903	1-533-468-11	FUSE, GLASS TUBE (DIA. 5)(T2AL/250V)	
△F904	1-533-464-11	FUSE, GLASS TUBE (DIA. 5)(T2AL/250V)	
△F905	1-533-464-11	FUSE, GLASS TUBE (DIA. 5)(T0.8AL/250V)	(AEP, UK)
< LINE FILTER >			
△LF901	1-424-150-11	TRANSFORMER, LINE FILTER	
< TRANSISTOR >			
Q901	8-729-056-23	TRANSISTOR STC352-OY	
Q902	8-729-119-79	TRANSISTOR 2SC2785TP-FEK	
Q903	8-729-056-23	TRANSISTOR STC352-OY	
< RESISTOR >			
R902	1-249-417-11	CARBON 1K 5% 1/4W F	
R903	1-249-425-11	CARBON 4.7K 5% 1/4W F	
R904	1-249-437-11	CARBON 47K 5% 1/4W	
R905	1-247-807-31	CARBON 100 5% 1/4W	
R906	1-247-807-31	CARBON 100 5% 1/4W	
< RELAY >			
△RY901	1-755-332-11	RELAY	
< SWITCH >			
△S901	1-786-152-11	SWITCH, SLIDE (HK,SP,TW)	(VOLTAGE SELECTOR)

Ref. No.	Part No.	Description	Remarks
< TRANSFORMER >			
△T901	1-437-251-11	TRANSFORMER, POWER (AEP,UK)	
△T901	1-437-253-11	TRANSFORMER, POWER (HK,SP,TW)	
△T902	1-437-248-21	TRANSFORMER, POWER (AEP,UK)	
△T902	1-437-250-11	TRANSFORMER, POWER (HK,SP,TW)	
*****			
A-4725-838-A TC BOARD, COMPLETE			
*****			
< CAPACITOR >			
C402	1-162-962-11	CERAMIC CHIP 470PF 10% 50V	
C403	1-104-509-11	CERAMIC CHIP 0.018uF 10% 16V	
C404	1-162-962-11	CERAMIC CHIP 470PF 10% 50V	
C405	1-126-934-11	ELECT 220uF 20% 10V	
C408	1-126-947-11	ELECT 47uF 20% 10V	
C409	1-126-963-11	ELECT 4.7uF 20% 50V	
C410	1-126-963-11	ELECT 4.7uF 20% 50V	
C412	1-126-961-11	ELECT 2.2uF 20% 50V	
C414	1-126-947-11	ELECT 47uF 20% 10V	
C415	1-126-947-11	ELECT 47uF 20% 10V	
C416	1-126-963-11	ELECT 4.7uF 20% 50V	
C417	1-126-963-11	ELECT 4.7uF 20% 50V	
C420	1-126-965-11	ELECT 22uF 20% 50V	
C422	1-162-969-11	CERAMIC CHIP 0.0068uF 10% 25V	
C423	1-126-960-11	ELECT 1uF 20% 50V	
C424	1-126-960-11	ELECT 1uF 20% 50V	
C425	1-126-934-11	ELECT 220uF 20% 16V	
C428	1-162-964-11	CERAMIC CHIP 0.001uF 10% 50V	
C429	1-164-730-11	CERAMIC CHIP 0.0012uF 10% 50V	
C430	1-164-730-11	CERAMIC CHIP 0.0012uF 10% 50V	
C431	1-162-964-11	CERAMIC CHIP 0.001uF 10% 50V	
C432	1-136-967-11	MYLAR 0.012uF 5% 50V	
C433	1-162-968-11	CERAMIC CHIP 0.0047uF 10% 50V	
C434	1-126-947-11	ELECT 47uF 20% 10V	
C435	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C436	1-104-509-11	CERAMIC CHIP 0.018uF 10% 16V	
C437	1-126-934-11	ELECT 220uF 20% 10V	
C438	1-162-965-11	CERAMIC CHIP 0.0015uF 10% 50V	
C439	1-126-935-11	ELECT 470uF 20% 16V	
C440	1-162-965-11	CERAMIC CHIP 0.0015uF 10% 50V	
C450	1-126-965-11	ELECT 22uF 20% 50V	
< CONNECTOR >			
* CN301	1-569-366-11	SOCKET, CONNECTOR 18P	
CN302	1-569-927-11	SOCKET, CONNECTOR 9P	
< DIODE >			
D401	8-719-975-40	DIODE RB411D-T146	
< IC >			
IC401	8-759-242-58	IC TA8189N	
IC402	8-759-508-69	IC BA3126N	

The components identified by mark △ or dotted line with mark △ are critical for safety.  
Replace only with part number specified.



Ref. No.	Part No.	Description	Remarks
< TRANSISTOR >			
Q401	8-729-212-02	TRANSISTOR KTC3203Y-AT	
Q402	8-729-037-02	TRANSISTOR KTA1266Y-AT	
Q403	8-729-038-67	TRANSISTOR KRC102S	
Q406	8-729-920-31	TRANSISTOR DTC343TK-T-146	
Q407	8-729-920-31	TRANSISTOR DTC343TK-T-146	
Q413	8-729-920-31	TRANSISTOR DTC343TK-T-146	
Q414	8-729-920-31	TRANSISTOR DTC343TK-T-146	
< RESISTOR >			
R399	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R400	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R403	1-216-805-11	METAL CHIP 47 5% 1/16W	
R405	1-216-809-11	METAL CHIP 100 5% 1/16W	
R406	1-216-831-11	METAL CHIP 6.8K 5% 1/16W	
R407	1-216-848-11	METAL CHIP 180K 5% 1/16W	
R408	1-216-831-11	METAL CHIP 6.8K 5% 1/16W	
R409	1-216-809-11	METAL CHIP 100 5% 1/16W	
R410	1-216-848-11	METAL CHIP 180K 5% 1/16W	
R411	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R412	1-216-824-11	METAL CHIP 1.8K 5% 1/16W	
R413	1-216-848-11	METAL CHIP 180K 5% 1/16W	
R414	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R415	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R416	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	
R417	1-216-805-11	METAL CHIP 47 5% 1/16W	
R418	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R419	1-216-824-11	METAL CHIP 1.8K 5% 1/16W	
R420	1-216-848-11	METAL CHIP 180K 5% 1/16W	
R421	1-216-857-11	METAL CHIP 1M 5% 1/16W	
R422	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R423	1-216-837-11	METAL CHIP 22K 5% 1/16W	
R424	1-216-841-11	METAL CHIP 47K 5% 1/16W	
R425	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	
R426	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	
R427	1-216-809-11	METAL CHIP 100 5% 1/16W	
R428	1-216-835-11	METAL CHIP 15K 5% 1/16W	
R429	1-216-835-11	METAL CHIP 15K 5% 1/16W	
R430	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	
R431	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	
R432	1-216-827-11	METAL CHIP 3.3K 5% 1/16W	
R433	1-216-825-11	METAL CHIP 2.2K 5% 1/16W	
R434	1-216-803-11	METAL CHIP 33 5% 1/16W	
R435	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R436	1-216-797-11	METAL CHIP 10 5% 1/16W	
R437	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	
R438	1-216-841-11	METAL CHIP 47K 5% 1/16W	
R439	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R440	1-218-446-11	METAL CHIP 1 5% 1/16W	
R441	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R442	1-216-825-11	METAL CHIP 2.2K 5% 1/16W	

Ref. No.	Part No.	Description	Remarks
< TRANSFORMER >			
T401	1-433-372-11	TRANSFORMER, BIAS OSCILLATION	
T402	1-419-080-11	COIL	
T403	1-419-080-11	COIL	
*****			
MISCELLANEOUS			
*****			
9	1-823-147-11	LEAD (WITH CONNECTOR)	
51	1-823-094-11	WIRE (FLAT TYPE) (18 CORE)	
53	1-757-809-11	CABLE, FLEXIBLE FLAT (9 CORE)	
54	1-796-101-11	DECK, MECH	
105	1-757-944-11	CABLE, FLEXIBLE FLAT (17 CORE)	
106	1-757-942-11	CABLE, FLEXIBLE FLAT (27 CORE)	
109	1-823-146-11	LEAD (WITH CONNECTOR)	
158	1-757-701-11	WIRE (FLAT TYPE) (25 CORE)	
△207	1-696-169-11	CORD, POWER	
209	1-682-098-11	OPTICAL RETAINER BOARD	
455	1-823-145-11	WIRE, PARALLEL (FFC) (16 CORE)	
△458	A-4735-357-A	BASE ASSY, DP (KSM-213DHAP/Z-NP)	
759	1-678-514-11	PWB, FLEXIBLE	
△760	A-4672-541-A	OPTICAL PICK-UP (KSM-260)	
HR901	1-500-670-11	HEAD, OVER LIGHT	
M101	A-4672-898-A	MOTOR ASSY, SPINDLE	
M102	A-4735-076-A	MOTOR ASSY, SLED	
M103	A-4735-074-A	MOTOR ASSY, LOADING	
M901	A-2004-893-A	MOTOR (LD) ASSY	
S102	1-771-957-11	SWITCH, PUSH (2 KEY) (REFRECT/PROTECT)	
△T902	1-437-248-21	TRANSFORMER, POWER (AEP, UK)	
△T902	1-437-250-11	TRANSFORMER, POWER (HK, SP, TW)	
TU1	A-4476-414-A	TUNER UNIT (AEP, UK)	
TU1	A-4476-416-A	TUNER UNIT (HK, SP, TW)	

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HARDWARE LIST

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#1	7-685-546-14	SCREW +BTP 3X8 TYPE2 N-S
#2	7-685-245-19	SCREW +KTP 3X6 TYPE2 NON-SLIT
#3	7-685-861-01	SCREW +BVTT 2.6X5 (S)
#4	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S
#5	7-685-659-71	SCREW +BVTP 4X8 TYPE2 IT-3
#6	7-685-548-19	SCREW +BTP 3X12 TYPE2 N-S
#7	7-685-850-04	SCREW +BVTT 2X3 (S)
#8	7-685-204-19	SCREW +KTP 2X6 TYPE2 NON-SLIT
#9	7-685-533-19	SCREW +BTP 2.6X6 TYPE2 N-S
#11	7-685-851-04	SCREW +BVTT 2X4 (S)

The components identified by mark △ or dotted line with mark △ are critical for safety.  
Replace only with part number specified.



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